THE INFLUENCE OF INTERPERSONAL FLEXIBILITY ON WORK TEAM CONFLICT OVER TIME

A Dissertation

by

FRANK GODARD BAUGH

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2004

Major Subject: Counseling Psychology

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Approved as to style and content by:

Daniel Brossart (Chair of Committee)	Michael Duffy (Member)
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ABSTRACT

The Influence of Interpersonal Flexibility on Work Team Conflict over Time.

(August 2004)

Frank Godard Baugh, B.S., William Carey College;

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Today a majority of business organizations utilize work team designs in an effort to gain a competitive edge. A multitude of factors exert varying levels of influence on work teams, however, few are as potentially pernicious as conflict. Although conflict in work teams has received much attention within the literature, there is notable absence of investigations that have considered the influence of interpersonal factors on conflict within team settings. The present longitudinal, field investigation sought to address this deficit by examining the influence of interpersonal flexibility on work team conflict and conflict-related consequences in 20 naturally occurring M.B.A. project teams. The following research questions were addressed: (1) What is the relationship of interpersonal flexibility to team conflict? (2) What is the relationship of interpersonal flexibility to team outcome? (3) To what extent does interpersonal flexibility predict team conflict occurrence? (4) To what extent does interpersonal flexibility predict team outcome? (5) What is the trajectory of team conflict and outcomes over time based on member interpersonal flexibility? In addressing the questions, a series of Pearson correlations, one-way ANOVA, and GLM repeated measure analyses were conducted.

Results suggest a connection between interpersonal flexibility and the experience of work team conflict. Interpersonal flexibility was negatively associated with conflict occurrence and positively associated with satisfaction, commitment, and effectiveness at some points in time. More importantly, interpersonal flexibility seems to explain a small to moderate amount of variance in the conflict and team outcome variables. Individuals and teams with a higher degree of interpersonal flexibility tended to report lower levels of conflict within their work teams and more satisfaction with their team membership. A consistent relationship between interpersonal flexibility level and member commitment or team effectiveness was not established. In addition, team interpersonal flexibility was not demonstrated to be predictive of team performance. The present investigation suggests that interpersonal flexibility exerts an important influence in work teams. However, additional research is essential toward fully understanding how and to what degree work team functioning can be explained by interpersonal flexibility.

DEDICATION

Courtney – As a wife, friend, and partner you are truly undeniable proof of our God's love for me. Without your presence in my life the successes would be less thrilling, the striving for goals more arduous, and the setbacks more difficult to bear. Your dazzling smile and tender voice simply enchant my heart. Though my attempts will undoubtedly pale in comparison to the love and support you give to me so unselfishly, I intend to spend our lives reminding you of how much I love you.

Callister – The tremendous joy you have brought into our lives is absolutely amazing! But one smile exploding across your tiny face with blue eyes sparkling causes my heart to leap and provides endless meaning for my life. What a beautiful blessing from God you are! I am honored to be your father and look forward with hopeful expectation to the years ahead spent cheering you on as you uncover the beauties of life.

Tabby – Who says dog is man's best friend? With your wispy tabby fur and soothing purr, you braved with me the seemingly endless nights of writing, researching, and studying. You instinctively knew when the stress had reached a non-productive level and willingly communicated your concern by perching on the keys of the computer as if to say, "Enough is enough. It is time to adjourn". Thank you for serving as a constant reminder that there is always time to nap or bask in the healing rays of the sun.

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I have always been blessed with numerous sources of support embodied in both family members and friends. Each of these individuals has been an unending source of

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CHAPTER I

INTRODUCTION

Many organizations struggling to maintain a competitive edge have implemented a work team design geared toward maximizing workforce utilization (Manz & Sims, 1987; Cohen & Ledford, 1994). The work team trend has gained popularity as more and more organizations embrace the approach in the United States and abroad (Beyerlein, Johnson, & Beyerlein, 1997; Cole, 1979; Ilgen, Major, Hollenbeck, & Sego, 1993). For example, a survey of Fortune 1000 companies revealed that almost half utilized work teams of some kind. In addition, fifty percent of these organizations endorsed plans to increase the use of team designs in the near future (Lawler, Mohrman, & Ledford, 1992). Likewise, Osterman (1994) found that almost half of U.S. businesses have fifty-percent of their employees involved in work teams. The importance of work teams has been so compelling Levine and Moreland (1990) confidently argued that teams are a central component to any effective organization.

The increase of team designs within organizations affected a significant impact on the scientific community. Scientists across multiple disciplines including organizational psychology, social psychology, organizational behavior and change, business, and organizational communication have spearheaded efforts to examine the effectiveness of team designs within the business setting. Overall, work teams have been demonstrated to exert a positive influence on organizational success. Yet, the literature

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aptly demonstrates that effective teams are not inevitable (Tjosvold & Tjosvold, 1994).

A multitude of factors exert varying levels of influence on work teams. Researchers seeking greater understanding of the team context have examined norms, decision-making, coordination, leadership, diversity, and other variables. Each of these factors impact and have the potential to impede healthy team functioning. Conflict, another potentially pernicious influence on work teams, has been afforded a significant amount of scientific attention at the organizational and team-level.

The issue of conflict within the business world began receiving scientific attention in the 1950s and 60s. Some theorists (e.g., Argyris, 1962; Evan, 1965) postulated that organizational conflict was undesirable in every context. Conversely, Coser (1956) and Deutsch (1949) argued that conflict exerted a positive influence on organizational and team functioning. The transition to work team designs within organizations during the mid and late 1980s sparked organizational researchers to examine both sides of the issue. Data gleaned from these investigations suggested that conflict interfered with team productivity, cohesion, member commitment, and member satisfaction (Gladstein, 1984; Levine & Moreland, 1990; Nemeth & Staw, 1989; Schwenk & Cosier, 1993). However, team conflict was also found to prevent stagnation, facilitate decision-making, and foster creativity (Bacharach & Lawler, 1981; Levine & Moreland, 1990; Pfeffer, 1981; Tjosvold, 1991; Van de Vliert & De Dreu, 1994).

The complex issue of team conflict continues to receive attention today. More recent investigations have attempted to discern in what contexts team conflict can be beneficial (e.g., Jehn, 1997; Jehn & Chatman, 2000). Group structure and conflict type

(Jehn, 1995) as well as diversity issues (Polzer, Milton, & Swann, 2002) have been examined in relation to team conflict and the subsequent impact on team functioning. Diversity issues have been defined as ranging from gender or values to personality characteristics such as interpersonal style (McGrath, Berdahl, & Arrow, 1995). Few studies have sought to shed light on these issues, despite speculation from many (Damon, 1991) that diversity may stimulate both positive and negative conflict. In fact, only a limited number of investigations (e.g., Kuhn & Poole, 2000) have focused on the varying influence of individual and team-level conflict management styles on the impact of team conflict.

A broader understanding of interpersonal flexibility, the degree to which an individual can enact a broad range of interpersonal behaviors consistent with situational contexts, within a team context and the subsequent relationship to team conflict is absent from the literature. Such a void is surprising, given the central role interpersonal interactions occupy within work teams and the inevitable presence of diversity regarding the degree of member interpersonal flexibility. Interpersonal theory and the interpersonal circumplex model provide a potential framework for understanding the interpersonal behaviors that occur within teams. Consistent with interpersonal theory, individuals who are capable of enacting a variety of interpersonal behaviors depending on the situation enjoy interpersonal flexibility and are considered by some theorists (e.g. Carson, 1969; Kiesler, 1988; Leary, 1957; Wiggins, Phillips, & Trapnell, 1989) to be more psychologically healthy than those who are less flexible. Extrapolating from interpersonal theory, it seems reasonable to expect that work teams composed of

interpersonally flexible members will experience less team-level conflict and conflict-related consequences.

A majority of the research appearing in the work team and conflict literature assumed a cross-sectional perspective. Some have recognized the limitations of a "snap-shot" approach to the study of conflict in teams and initiated longitudinal investigations that have highlighted the importance of temporal issues on team functioning. However, the difficulties associated with longitudinal research severely limits the number of these studies and our understanding of time as related to team conflict. Additional investigations utilizing a longitudinal method in the examination of work team conflict are clearly needed to further expand the more narrow cross-sectional view.

Statement of Purpose

This study augments the work team conflict literature by evaluating the influence of team and individual-level interpersonal flexibility on the functioning and performance of M.B.A. project teams at a large southwestern university. Previous literature has examined the influence of interpersonal styles on organizational conflict. For example, Rahim (1983) developed and has utilized the Rahim Organizational Conflict Inventory-II (ROCI-II) specifically to assign respondents to one of five styles of handling interpersonal conflict. However, conflict management styles provide little insight into the antecedents of team conflict. Few, if any, investigations have considered the influence of interpersonal factors on conflict within team settings.

Consequently, the present research utilized interpersonal theory as a framework for understanding the occurrence and impact of team conflict within 20 M.B.A. student,

project teams at a large southwestern university. The Battery of Interpersonal Capabilities (Paulhus & Martin, 1988) yielded the Functional Flexibility Index, a direct assessment of the participant's level of interpersonal flexibility. Team-level interpersonal flexibility was determined through an aggregation process. Subsequently, the power of interpersonal flexibility to explain team-level conflict and related consequences was examined. Member commitment to the team, satisfaction with the team, and evaluation of their teams' effectiveness were also evaluated in relationship to interpersonal flexibility and team conflict. Interpersonal flexibility was assessed prior to the teams' initial work together. Conflict type, task and relationship, were examined approximately every 2.5 weeks for a total of four measurement points. Total conflict was determined by aggregating participants' report of task and relationship conflict at a discreet time point. Member commitment to their team, satisfaction with their team, and evaluation of their teams' effectiveness were measured with conflict. A final rating of team performance was collected from an expert rater following the submission of the teams' final projects.

Research Questions

The investigation sought to address the following research questions:

(1) What is the relationship of interpersonal flexibility to team conflict occurrence?

(2) What is the relationship of interpersonal flexibility to team outcome?

(3) To what extent does interpersonal flexibility predict team conflict occurrence?

(4) To what extent does interpersonal flexibility predict team outcome?

(5) What is the trajectory of team conflict and team outcome variables over time based on member interpersonal flexibility?

CHAPTER II

REVIEW OF LITERATURE

The popularity of work team designs within business organizations has reached an all time high (Beyerlein, Johnson, & Beyerlein, 1997; Cole, 1979; Ilgen, Major, Hollenbeck, & Sego, 1993). Business organizations in the United States have recognized the competitive edge afforded through the use of work teams and just under half have embraced the approach (Osterman, 1994). As the use of work teams in business organizations fast becomes the norm (De Dreu & Weingart, 2003; De Dreu, Harinck, & Van Vianen, 1999; Wall & Callister, 1995), the need for continued examination of team conflict in a natural work environment is clear.

Scientific research targeting organizational issues has addressed the role of conflict in stimulating and derailing effective team functioning (e.g., Gladstein, 1984; Levine & Moreland, 1990; Tjosvold, 1991; Van de Vliert & De Dreu, 1994). However, a majority of the work team investigations to date have assumed a cross-sectional approach and almost completely ignored the influence of member interpersonal characteristics as antecedents to team conflict. Given the increase in team designs within business and the inherent interpersonal nature of work team tasks, research that explores the connection between interpersonal flexibility and work team conflict from a longitudinal perspective is warranted. A solid understanding of the literature in the work team area coupled with a strong model for explaining interpersonal behavior is needed to provide support for the present study. Toward this end, this chapter systematically

reviews classic and contemporary literature regarding work teams, conflict occurrence, and interpersonal theory.

Work Teams

The diverse nature of organizations implementing a group design approach has led to multiple labels and definitions of what constitutes groups or teams. Common labels appearing in the organizational and popular business literature include: work groups (Walton, 1977), self-directed work teams (Fisher, 1993), self-managing work teams (Manz & Sims, 1987), and empowered teams (Guzzo & Dickson, 1996). Some writers have used the terms interchangeably (Hackman & Walton, 1986; Guzzo & Dickson, 1996). However, Seers et al. (1995) made a distinction between traditional work groups and self-managing teams based on decision influence members are expected to exert. According to these authors, traditional work groups are those in which little decision influence is expected. Conversely, self-managing teams are expected to assume the responsibility for deciding the 'what' and 'how' of team tasks (Seers et al., 1995). Various writers have put forth other definitions of work groups and teams. Fisher's (1993) description of self-directed teams seems to provide the most comprehensive definition of the newest form of work group. He defined self-directed teams as,

> …a group of employees who have day-to-day responsibility for managing themselves and the work they do with a minimum of direct supervision. Members of self-directed teams typically handle job assignments, plan and

> schedule work, make production and/or service related decisions, and take action on problems. (p.15)

The present investigation gleaned data from M.B.A. study teams that exercised complete autonomy in deciding the 'when' and 'how' of their work. However, these teams exerted little or no influence on identification of the overall task or project. Examination of such teams appears in the literature and represents a close approximation of organizational work teams (Jehn & Mannix, 2001). In order to ease communication, the term "work team" is utilized throughout the remainder of the present paper.

Conflict and Work Teams

Renwick (1975) described conflict as a pervasive aspect of organizations that is often present in dyadic and group relationships, the effects of which can seep into coordination, decision-making, and other important organizational behavior domains. More recently, other authors (e.g., Amason, 1996; Janssen, Van de Vliert, & Veenstra, 1999; Putnam, 1994) have contended that conflict is an inevitable aspect of ongoing work team interactions. For example, Van de Vliert and Janssen (2001) recently asserted that, "Conflict-free groups do not exist" (p. 267). If conflict is an inevitable aspect of groups (i.e., work teams), a logical question would seem to persist—what is the impact of conflict on teams? The wave of organizational redesign into work teams and the realization of the likely presence of team conflict led to multiple investigations geared toward answering this question.

Continual debate exists in the literature concerning the merits of conflict as a positive influence in organizations. Some early theorist (e.g., Argyris, 1962; Evan, 1965; Hackman & Morris, 1975; Pondy, 1967) postulating that organizational conflict has detrimental consequences for organizational functioning, inspired a tradition of investigations which examined the negative impact of conflict. In this tradition, decreases in member satisfaction, member commitment, team productivity, team cohesion, and increases in hostility have each been linked to the presence of conflict. Based on this literature, it was surmised that conflict results in tension, antagonism, and distracts employees from executing their job responsibilities (Brown, 1983; Gladstein, 1984; Levine & Moreland, 1990; Nemeth & Staw, 1989; Saavedra, Earley, & Van Dyne, 1993; Schwenk & Cosier, 1993).

Others (e.g., Coser, 1956; Deutsch, 1949), recognizing the potentially beneficial effects of conflict, argued that conflict is a necessary and useful part of effective team functioning. Various empirical investigations have supported these suppositions identifying several positive aspects of conflict. Prevention of stagnation, facilitation of decision-making, and fostering creativity and innovation are among the most often cited benefits of team conflict (Bacharach & Lawler, 1981; Levine & Moreland, 1990; Pfeffer, 1981; Tjosvold, 1991; Van de Vliert & De Dreu, 1994). Proponents of this view hypothesized that low levels of conflict force people to think creatively, engage in perspective taking, and confront issues. Without conflict, failure to address potential problems or fine-tune team functioning may become the norm (Coser, 1956; Deutsch, 1973; Walton, 1969; Levine, Resnick, & Higgins, 1993; Tjosvold, 1997).

Jehn (1994) attempted to reconcile the disparity in conflict research findings by proposing a view that differentiated between task and relationship conflict. Attempting to delve deeper into the nature of conflict, Jehn (1995, 1997) and other researchers (e.g., Jehn & Chatman, 2000; Amason & Schweiger, 1994, 1997; Amason & Sapienza, 1997) undertook a series of studies that attempted to discern which type of conflict and in what context team conflict was beneficial.

Jehn (1995) examined the links between group structure (task type, task interdependence, and group norms), conflict type, and group and individual performance in 105 work groups and management teams. The type of task performed by the team (routine versus non-routine) affected the impact of conflict. Task conflict was beneficial for teams focused on non-routine tasks, but detrimental for groups performing routine tasks. A curvilinear relationship was found between task conflict and team performance for non-routine task groups suggesting that task conflict is beneficial only up to a point. Relationship conflict was detrimental regardless of the task. Furthermore, task interdependence and conflict norms supporting openness exacerbated the effects of relationship conflict (Jehn, 1995).

Later investigations (e.g., Amason & Sapienza, 1997; Simons & Peterson, 2000) supported the notion that task conflict can positively impact team performance, while relationship conflict always impedes healthy team functioning. Simons and Peterson (2000), drawing from the conflict literature, surmised that task conflict has a beneficial impact because it stimulates increased cognitive understanding of the facts and issues. Conversely, relationship conflict reduces the processing of information by causing

members to focus on each other rather than issues related to the team's project (Simons & Peterson, 2000). As De Dreu and Weingart (2003) indicated, the presence of this perspective within the management and organizational behavior textbooks is a testament to its widespread acceptance.

However, some research has contradicted the positive correlation between task conflict and team performance. For example, Jehn, Northcraft, and Neale (1999) and Lovelace, Shapiro, and Weingart (2001) reported negative correlations between task conflict and team performance. Others (e.g., Pelled, Eisenhardt, & Xin, 1999) found no statistically significant relationship between team performance and task conflict. Carnevale and Probst (1998) found that competitive, hostile negotiations substantially decreased the degree of creativity and cognitive flexibility as compared to a control condition involving cooperative negotiations. The authors postulated that increases in conflict results in greater cognitive load that, in turn, suppresses creativity and flexibility in thinking. When considering the range of results gleaned from conflict investigations, it becomes clear that the issue of conflict and team performance is rather complex.

De Dreu and Weingart (2003) recognized the contradictions present in the conflict research and sought to resolve the issue through publication of a meta-analytic study of conflict, team performance, and team member satisfaction gleaned from cross-sectional investigation results. Thirty published and unpublished studies that measured (a) relationship and/or task conflict (b) team performance and/or member satisfaction were included in the meta-analysis. Surprisingly, results suggested that both task and relationship conflict were equally troublesome for effective team performance. In

addition, no positive correlations were noted for the conflict type-team performance relationships when consideration of complexity and nonroutiness of team task were included as moderator variables. However, team member satisfaction is more negatively impacted by relationship conflict than task conflict (De Dreu & Weingart, 2003). Overall, this investigation provides confirmatory evidence for the information processing perspective (cf. Carnevale & Probst, 1998), which suggested that a small amount of conflict is beneficial initially but rapidly becomes counterproductive as conflict becomes more pronounced resulting in disruption of information processing (De Dreu & Weingart, 2003).

De Dreu and Weingart (2003) seemed to have provided much needed clarification as regards the true relationship between conflict-type, member satisfaction, and team performance within cross-sectional research. However, the absence of longitudinal conflict research within the authors' meta-analysis is somewhat disturbing. The complexity of the team conflict variable and widespread recognition that a deeper appreciation for the temporal aspects of team functioning has resulted in a growing number of longitudinal team conflict investigations (Jehn & Mannix, 2001).

Group Development and Time

Early group development research had an inherent focus on temporal issues. Both the group dynamics and the phase approach to group problem solving lines of research attempted to describe the evolution of group behaviors throughout the life of the group. The group dynamics tradition, beginning in the 1940s, culminated with Tuckman (1965) synthesizing the work of such researchers as Bennis and Shepard

(1956), Bion (1961), and others into a unitary sequence or stage model of group development. Tuckman (1965) identified "forming", "storming", "norming", and "performing" as developmental sequences groups in most contexts could be expected to experience. Later, Tuckman and Jensen (1977) updated the model to include the last stage, "adjourning", which emerged in the group development research. Subsequent models of group development (cf. Hare, 1976; LaCoursiere, 1980; McGrath, 1984) are closely related to Tuckman's (1965) model. The other stream of research in this area is concerned with decision development. Exemplars in this context include Bales and Strodtbeck (1951) and Fisher (1970).

Gersick (1988, 1989), more recently, advanced a contradictory conceptualization of group developmental processes that neither limit group actions to linear stages nor to specific behaviors. Rather, Gersick (1988) introduced the concept of "punctuated equilibrium" to describe temporal phases that emerge in groups characterized by activity and inactivity. In this model, the first meeting for a team results in the construction of a framework for behavioral patterns and assumptions regarding the manner by which the team will approach its project. The initial framework remains intact through the first half of the team project's life. During the first phase teams' may make little visible progress but appear to be operating on inertia instigated from the first meeting. However, an important transition occurs at the midpoint of the team's project calendar whereby the learning from the first phase becomes crystallized and the team has the opportunity to alter its original framework. The second phase of the team's project life is also fueled by inertia but is directed by the revised plans crystallized at the midpoint.

Toward the end of the project or task, the team makes its final efforts to satisfy external expectations and the consequences generated from choices made at the transition point are realized (Gersick, 1988).

Many others (cf. Bell, 1982; Mintzberg, Raisinghani & Theoret, 1976; Seeger, 1983) have acknowledged the limitations of static stage models in describing group development over time. The influence of temporal factors on work team contexts represents an important consideration for researchers seeking to examine team variables. Time as a confounding variable in work team research further complicates the context. However, utilization of measurement models that ignore time when evaluating team variables that ebb and flow over time such as conflict, team effectiveness, member satisfaction, or member commitment have the potential to result in oversimplified data and interpretations.

Temporal Aspects of Conflict

Some researchers have relied on a narrow "snapshot" or cross-sectional approach to examining team conflict (Jehn & Mannix, 2001). Multiple conflict studies adhering to the cross-sectional perspective (e.g., Amason, 1996; Jehn, 1994; Putnam, 1994) have led to important advances in our understanding of the conflict construct. Unfortunately, the measurement of conflict at one specific point in time, though efficient and economical, fails to account for the influence of temporal factors on the occurrence and impact of team conflict.

Conversely, multiple other investigators have recognized the complex interaction of time with group conflict. For example, Baxter (1982) employed a unique "episodic

approach" to the study of conflict that provided quantitative as well as rich qualitative data. Additionally, O'Connor, Gruenfeld, and McGrath (1993) and colleagues conducted a series of longitudinal studies within the JEMCO workshop focused on examining group level variables across temporal phases.

More recently, Kuhn and Poole (2000) examined the influence of group conflict management style and effectiveness of decision-making in naturally occurring organizational teams. The examined styles included: avoidant (actively ignoring or shifting focus from conflict), distributive (confronting the other party while actively arguing for one's own position), and integrative (cooperatively addressing the conflict by attempting to reach a mutually favorable resolution). Results indicated that conflict management styles exert a differential influence on decision-making effectiveness. For example, the teams identified as possessing an integrative conflict management style were rated as reaching highly effective decisions. Teams implementing a distributive or avoidant approach to conflict received mixed scores regarding decision effectiveness (Kuhn & Poole, 2000). Overall, Kuhn and Poole suggested that integrative conflict management and characteristics of good decision making could be part of a larger set of communicative behaviors implemented by effective teams.

Similarly, Jehn and Mannix's (2001) longitudinal investigation of team conflict in study teams composed of M.B.A. students demonstrated that temporal factors interact with the occurrence and impact of team conflict. Specifically, data was collected from 51 randomly assigned, three-person project teams composed of members enrolled in the same general management course at three separate U.S. business schools. Jehn and

Mannix divided the 10, 12, and 14-week semesters at the schools into three time blocks. Types of conflict (task, relationship, process) and group atmosphere were measured at the beginning, middle, and end of each time block. Group values consensus was measured prior to team formation. In addition, one expert rater who evaluated the teams' final project reports supplied a performance outcome rating.

Results indicated that high performing teams exhibited low and increasing levels of process conflict, initially low levels of relationship conflict that rose near project deadlines, and moderate levels of task conflict at the project midpoint. Lower performing teams experienced low levels of task conflict early, a further dip in task conflict at the midpoint, and a high degree of task conflict just before project deadlines. Relationship conflict in these teams followed the same pattern. In general, conflict was lower for high performing teams as compared to low performance teams at all points, except for task conflict during the midpoint. Additionally, the results were consistent with Gersick's (1988, 1989) theory that the midpoint is a crucial time for teams to engage in focused debate and make necessary adjustments to the initial project framework (Jehn & Mannix, 2001).

Overall, the results of this investigation highlighted the importance of examining the team conflict variable over time. For example, Jehn and Mannix (2001) stated, "Our findings reinforce the view that conflict must be examined as a dynamic process, rather than as a static event…" (p. 247). The authors also noted that their interpretations of the data would have been dramatically different had a one-time, cross-sectional design been implemented to measure conflict (Jehn & Mannix, 2001).

Conflict Domains

Various authors (e.g., De Dreu, Harinck, & Van Vianen, 1999; Wall & Callister, 1995) have defined conflict as a process whereby real or perceived differences give rise to tension between people or groups. As mentioned previously, most team research has focused on two types of team conflict. Task conflict can be best described as disagreements concerning the identified work of the team (Jehn, 1995). Disagreements regarding resource allocation, project procedures, or interpretations of facts are examples of task conflict. Relationship conflict has been defined as discord based on personal or social issues unrelated to the team task (Pelled, 1995). Examples of relationship conflict include differences in personal taste, political views, and interpersonal styles (De Dreu & Weingart, 2003). More recently, a third conflict domain has received attention. Process conflict is concerned with how the team performs its work. Divergence of opinion regarding determination of task strategies, delegation of roles or responsibilities, and development of project schedules are representative of process conflict (Jehn 1997; Jehn, Norcraft, & Neale, 1999).

Although each of the three conflict types was demonstrated to represent distinct constructs, relationship and task conflict have received the majority of attention within the work team literature. In the present study, the conflict variable was assessed along with multiple other team outcome variables at several time points. The streamlining of survey instruments was of utmost importance. As a result, only relationship and task conflict were assessed at each measurement point. Total conflict was also determined by aggregating participants' reports of task and relationship conflict at each time.

Interpersonal Flexibility and Work Teams

Issues of diversity or member differences have received increased attention as antecedents to various team processes and outcomes (Milliken & Martins, 1996). Many have argued that diversity has the potential to stimulate cognitive (task) conflict, which can lead to more effective solutions or decisions (Damon, 1991). Some research investigations (e.g., Jehn, Northcraft, & Neale, 1999; Ely & Thomas, 2001) have provided empirical support for the notion that member differences within a team context encourage the sharing of diverse perspectives, ideas, and skills that increase the team's ability to develop creative solutions to problems.

Conversely, others have argued that member differences are disruptive because members are apt to only view each other through the lens of stereotypes and thus impede team communication and cohesion (Polzer, Milton, & Swann, 2002). Despite repeated efforts to reconcile these divergent viewpoints through scientific research, results have proved ambiguous at best (Guzzo & Dickson, 1996), leading several authors to conclude that diversity has the potential to improve or disrupt team performance dependent on the context (Milliken & Martins, 1996; Pelled, Eisenhardt, & Xin, 1999). As a result, researchers have shifted focus away from specific diversity issues to examine the factors that seem to moderate the impact of diversity on team processes and outcomes. Hobman, Bordia, and Gallois (2003), an exemplar in this alternative diversity line of research, concluded that value dissimilarity was positively associated with team conflict and negatively related to team involvement. Perceived group openness to diversity moderated the relationship between visible and

informational dissimilarity and work team involvement, as well as between value dissimilarity and task conflict (Hobman, Bordia, & Gallois, 2003).

McGrath, Berdahl, & Arrow (1995) defined diversity as ranging from values or gender to interpersonal style. In fact, the inherent interpersonal exchange within the team context has stimulated interest in the moderating impact of interpersonal factors on the relationship of diversity issues with team performance. For example, one investigation (i.e., Polzer, Milton, & Swann, 2002) examined the connection of interpersonal congruence (the degree to which group members see others in the group as others see themselves) in small work groups to issues of diversity and team performance. The longitudinal investigation of 83 work groups revealed that teams with high interpersonal congruence experienced improved creative task performance as a result of diversity. The performance of low interpersonal congruent teams was undermined by the same diversity factors (Polzer, Milton, & Swann, 2002).

Notwithstanding the ambiguity in diversity research results, Polzer, Milton, and Swann (2002) demonstrated the potential benefit of continued examination of interpersonal issues. Indeed, the central role interpersonal interactions occupy in team contexts, the inevitable presence of diversity regarding team member interpersonal flexibility, and the potential for poor outcome due to an abundance of team conflict suggests the importance of examining interpersonal flexibility as an antecedent to work team conflict.

Interpersonal Theory

A focus on interpersonal exchanges requires a solid knowledge base on which a strong measurement model could be constructed. Interpersonal theory, with a focus on the verbal and nonverbal interactions that occur between individuals, represents a popular and widely generalizable model for understanding interpersonal interactions and behaviors. Two postulates occupy a central role within the theory. The first assumption is that all social interactions can be characterized in terms of specific interpersonal behaviors depicted in the interpersonal circumplex model (IPC). The IPC, serving as a comprehensive model of interpersonal tendencies, seeks to describe social interactions in terms of overt behavioral negotiations (Gurtman, 1992). Within the IPC, interpersonal behaviors can best be characterized as falling within a two dimensional space.

The affiliation dimension describes interpersonal behaviors on a continuum of *hostile* (cold) to *friendly* (warm), whereas the power or status axis ranges from *dominating* to *submissive* behaviors (Horowitz et al., 1991; Horowitz, Rosenberg, & Bartholomew, 1993; Wagner, Kiesler, & Schmidt, 1995). Typically, the IPC is divided into eight behavioral octants. For example, *sulking* behavior lies in the two-dimensional space reflecting *hostile-submissive*. Oppositely, *scolding* falls in the *hostile-dominant* quadrant. The eight behavior octants appearing in Figure 1 (*dominant, advise, warm, defer, submissive, sulk, cold,* and *scold*) are each associated with a particular interpersonal tendency and represent an "integration" of the principal dimensions or axes (Gurtman, 1992).

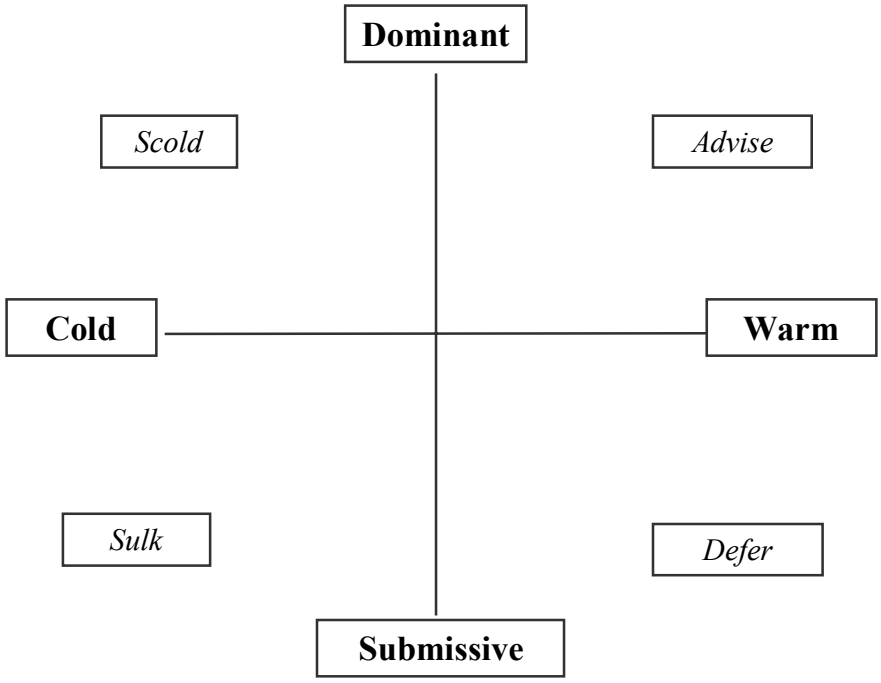

Figure 1. A Depiction of the Interpersonal Circumplex Model.

The second postulate of interpersonal theory assumes that people reciprocally influence each other and hence their interpersonal exchange as they interact (Darley & Fazio, 1980; Kiesler, 1983; Leary, 1957; Sullivan, 1953; Horowitz et al., 1991). In other words, one person's interpersonal behaviors elicit or invite specific types of reactions from another person and vice versa (Carson, 1969). According to interpersonal theory, a behavior and its most likely reaction are considered complementary. Complementary behaviors are similar in terms of the *hostile-friendly* axes and reciprocal in terms of the *dominant-submissive* axes. In this manner, *submissive-hostile* behaviors invite *dominant-hostile* responses, whereas *dominant-friendly* behaviors tend to elicit

submissive-friendly responses. For example, if Supervisor A scolds Employee X, Employee X is invited to *sulk* or *self-justify* (Horowitz et al., 1993). Likewise, if Team Member A routinely *defers* to Team Member B, Team Member B is invited to *advise* or *direct* Team Member A.

Although interpersonal behaviors tend to elicit certain complementary responses, some interpersonal interactions are characterized by noncomplementary reactions. For example, Person J attempts to dominate Person K, yet Person K responds in a dominating rather than a submissive style. When noncomplementary interactions occur, tension arises and partners are faced with three behavioral options. One or both interactants can adapt to the situation changing their behavior, disengage from the interaction, or remain committed to her initial response (Horowitz et al., 1993). Of course, the latter response from both individuals will naturally lead to the escalation of tension and overt conflict is likely to surface. Thus, complementary responses and flexibility in behavioral responding represent two factors likely to decrease the occurrence and impact of conflict.

The IPC has been supported in more than 40 years of theorizing and psychological research (Carson, 1969; Foa, 1961; Kiesler, 1982, 1983; Leary, 1957; Sullivan, 1953; Wiggins, 1982). Multiple domains have given the circumplex model considerable attention including personality development (Carson, 1969; Horowitz & Vitkus, 1986; Kiesler, 1982, 1983; Orford, 1986; Wiggins, 1979), psychopathology (Benjamin, 1993; Kiesler, 1986), social psychology (Buss, Gomes, Higgins, & Lauterbach, 1987; Gifford, 1991; Moskowitz, 1994), and psychotherapy (Andrews,

1991; Beier & Young, 1984; Benjamin, 1993; Hurley, 1990; Kiesler, 1988, 1992; Soldz, Budman, Davis, & Demby, 1993; Strupp & Binder, 1984). In addition, numerous factor analytic investigations have consistently revealed that the two dimensions of the IPC account for a large proportion of variance in ratings of personality traits (e.g., Becker & Krug, 1964; Conte & Plutchik, 1981; Foa, 1961).

Interpersonal Flexibility

The Interpersonal Circumplex Model identifies interpersonal tendencies that are strongly related to personality dimensions, however, such constructs are not necessarily static traits. Humans are capable of enacting a broad range of interpersonal behaviors. Some psychotherapy theorists (Carson, 1969; Kiesler, 1988; Leary, 1957; Wiggins, Phillips, & Trapnell, 1989) have suggested that individuals experiencing pervasive interpersonal problems tend to exhibit a restricted range of interpersonal behaviors. Conversely, other individuals are quite adept at moving around the eight octants of the IPC and consequently enjoy flexibility in responding to a variety of individuals and interactions (Block, 1961; Paulhus & Martin, 1988).

The concept of interpersonal flexibility, the degree to which an individual can "move around" the interpersonal circumplex enacting each of the sixteen behaviors when the situation requires it, and the accurate measurement of flexibility occupied a central role within the present investigation. Although several measures of interpersonal style are in existence today, most interpersonal instruments can be categorized as trait or state measures and completely ignore a person's interpersonal flexibility. According to Wagner, Kiesler, & Schmidt (1995) the most widely utilized measures in interpersonal

research are the Interpersonal Adjectives Scale – Revised (Wiggins, Trapnell, & Phillips, 1988) and the Inventory of Interpersonal Problems (Horowitz, Rosenberg, Baer, Ureño, & Villseñor, 1988). Both the Interpersonal Adjectives Scale – Revised (IAS-R) and the Inventory of Interpersonal Problems-Circumplex (IIP-C), a later derivation of the original IIP (Alden, Wiggins, & Pincus, 1990), measure the eight octants of the interpersonal circumplex model (Pincus & Wiggins, 1990; Soldz, Budman, Demby, & Merry, 1993), but are better described as trait measures.

A major limitation of trait ratings of interpersonal style is that an individual is necessarily relegated to one primary mode of interpersonal response irrespective of the situational context. For example, an individual receiving a high rating on the dominance attribute cannot simultaneously receive a high rating on the nurturance attribute. As a result, an individual's interpersonal flexibility (i.e., the degree to which an individual can enact the full repertoire of interpersonal behaviors) cannot be accurately determined.

Some personality theorists have suggested that personality characteristics are more accurately interpreted as abilities than traits. Wallace (1966, 1967) argued that a person's tendency to enact an interpersonal behavior depends on her ability to perform the behavior (i.e., skill) impacted by the situational context. For example, an individual may not typically exhibit dominant behavior because they are incapable of such behavior (i.e., they lack the necessary skill) or their ability to dominate is usually inhibited. In other words, an employee may be reluctant to dominate a peer in the presence of a supervisor. Conversely, an employee could be capable of hostile behaviors but may lack the necessary motivation to enact such a style. The *Battery of*

Interpersonal Capabilities was constructed as a state rating of interpersonal behaviors to eliminate the assumption that an individual only possesses one mode of interpersonal behavior (Paulhus & Martin, 1987).

Interpersonal Theory and Work Team Conflict

The application of interpersonal theory to an organizational context has not received attention within the organizational or work team literature. However, the concepts underlying interpersonal theory can be readily applied to a majority of interpersonal interactions including those occurring within organizational settings. Given the interpersonal nature of work team tasks (e.g., cooperation, coordination, decision-making) and the inherent interactional components of conflict, the IPC has the potential to provide a unique, comprehensive understanding of conflict occurrence and course within work teams.

Extrapolating from interpersonal theory, it seems reasonable to expect that teams largely composed of members who demonstrate flexibility in interpersonal responses should experience less tension or conflict and fewer conflict-related consequences. Likewise, teams consisting of members whose styles are less flexible than the aforementioned teams, but who exhibit complementary interpersonal tendencies should also experience a decreased amount of conflict and increased resolution of conflict occurrences. Antithetically, teams whose members demonstrate static interpersonal tendencies and/or noncomplementary responses are likely to experience greater conflict occurrence and increased conflict-related consequences.

Interpersonal theory offers multiple advantages over a traditional personality trait approach to team dynamics. Unlike many personality trait models, interpersonal theory does not assume that interpersonal tendencies are inherently static. In other words, individuals can enact or learn to enact a variety of interpersonal responses. Second, the underlying concepts of the IPC are easily transmitted, understood, and implemented. The implication is that work team managers, work team leaders, and work team members can be trained in interpersonal theory and interpersonal flexibility or even selected based on present-level interpersonal flexibility. As a result, a better understanding of the relationship between interpersonal flexibility and team conflict has the potential to inform team member selection and training efforts.

Team Effectiveness

Aspects of team effectiveness abound in the literature. Descriptors of effectiveness have ranged from member satisfaction to subjective leader ratings (Nygren & Levine, 1996). Team conflict investigators (e.g., Wall & Nolan, 1987; O'Connor, Gruenfeld, & McGrath, 1993; Alper et al., 2000) have consistently examined members' attitudes toward the team (i.e., satisfaction and commitment), cohesion, and productivity in relation to the presence and type of conflict. Results from these and other team conflict studies suggest that member attitudes, cohesion, and productivity are reasonable indicators of the team effectiveness construct.

Consistent with Jehn and Chatman (2000) the present investigation examined the team effectiveness construct by way of team performance, member commitment, and member satisfaction. Team performance was composed of two separate ratings. First,

each member was asked to evaluate her/his team's effectiveness at each measurement point. In addition, team performance data was also collected from an internal project evaluator. Member commitment was defined as the members' willingness to remain in their respective team at present and continue with the team in the future. Member satisfaction was represented as a member's level of satisfaction with his/her team membership. The aforementioned factors have appeared within the team conflict literature and are arguably among the most important indicators of functionality for the majority of task performing work teams.

Summary

The need for studies that shed additional light on our understanding of the interaction of team conflict incidents and time is clear. Jehn and Mannix's (2001) and Kuhn and Poole's (2000) investigations and subsequent findings represent meaningful first steps toward more closely examining the dynamic nature of conflict and its influence on team effectiveness. However, Brossart, Patton, and Wood (1998b) highlighted the inherent difficulty in examining the stability or course of a group phenomenon over time in any context, particularly when the characteristics of the phenomenon are unknown. In the context of longitudinal data it can be helpful to proceed with an exploratory, descriptive approach that places few demands on the nature of the data (such as normality) followed by additional analyses informed by the descriptive approach. An ideal exploratory approach would not require that the data be normally distributed, it would also be able to deal with nonlinear data and account for

intraindividual (individual variability) and interindividual (variability between groups of people) differences (Brossart, Parker, & Willson, 1998a).

A notable limitation of Jehn and Mannix's (2001) study is the implicit assumption that the mean or average occurrence of conflict for a team represents all team members equally well. In settings where members are very homogeneous as regards the variable(s) of interest, the group mean may be a reasonable and even ideal measure. Conversely, teams could be glaringly heterogeneous in terms of the main variable(s). Employing a group mean for a variable in the heterogeneous team is likely to be a poor representation of the variable for most team members. For example, describing a 3-person team in terms of a mean IQ of 115 when the members' respective IQ scores are 102, 106, and 136 would be less than ideal. Given the apparent link of team diversity (i.e., heterogeneity) to team conflict (cf. McGrath, Berdahl, & Arrow, 1995) and the importance of temporal factors, an approach to the measurement of conflict that does not rely on averages is warranted.

The present investigation attempted to address this issue by aggregating the members' scores on measured scales for each team at each measurement point. For example, relationship conflict for Team 1 at the first measurement point was calculated by adding each of its members' relationship conflict scores for time one. Inequality in the team size was accounted for by converting aggregated sums into z-scores.

Overall, the present study sought to provide a more accurate, albeit, complex view of conflict by evaluating the occurrence and course of team conflict over time at the individual and team-level. Explicitly analyzing the occurrence of conflict over time

resulted in an intricate, yet more precise measurement model. As Jehn and Mannix (2001) argued, the cross-sectional measurement of a team phenomenon that fluctuates over time seriously hinders accurate interpretation of results.

The new trend of scientific research focused on understanding diversity issues within the team context has recognized the need to consider interpersonal factors as important diversity issues. Consistent with this movement, the present study examined interpersonal flexibility as an antecedent to the occurrence of conflict and impacting team performance. In addition, utilization of the Battery of Interpersonal Capabilities (Paulhus & Martin, 1987), which provides the Functional Flexibility Index, offers multiple advantages over traditional interpersonal style instruments and has the potential to demonstrate an important connection between member interpersonal flexibility and the occurrence of work team conflict.

Hypotheses

Based on the above empirical and theoretical literature, the following hypotheses were tested:

Hypotheses 1 – Interpersonal flexibility will be negatively related to team conflict. – (question 1)

Hypothesis 2 – Interpersonal flexibility will have a positive relationship to team outcomes. – (question 2)

Hypothesis 3 – Participants and teams with higher levels of interpersonal flexibility will experience lower levels of team conflict at times 2 and 4. – (question 3)

Hypothesis 4 – Participants and teams with higher levels of interpersonal flexibility will experience higher levels of team outcome at times 2 and 4. – (question 4)

Hypothesis 5 – Participants and teams with higher levels of interpersonal flexibility will experience different trajectories of team conflict and outcome over time as compared to less flexible participants and teams. – (question 5)

CHAPTER III

METHOD

Participants

The study collected data from participants recruited from a first-year cohort of students enrolled in a Masters of Business Administration (M.B.A.) program at a large southwestern university. One hundred and two first-year M.B.A. students formed 20 new, self-directed, project teams composed of approximately five members. No team possessed a shared history of functioning. However, a small minority of teams consisted of some members who had worked together within other team contexts. Tasks performed across the M.B.A. teams were identical. Examples of major tasks completed by each team included written assessments of weekly case studies, production of a 30-page managerial application report that analyzed and evaluated a major executive in relation to the eight managerial foundation competencies emphasized throughout the course, and a professional presentation of the team managerial application report.

The majority of participants were male (81.37%) and unemployed (70%). Of the total, 56.6% were Caucasian, 31.3% were Hispanic, 5% were of Middle Eastern descent, 4.9% were Asian, and 1% was African-American. The average age of the participants represented in this study was 26.8 with a standard deviation of 2.94 years, the youngest participant being 23 years old and the oldest being 35 years of age. The average number of months spent in a work team environment was 51.43 months, with a standard deviation of 35.73 months, a minimum of 0 months, and a maximum of 144 months.

Design

The present study was a longitudinal field investigation that collected data utilizing survey methods. Data collection spanned from the second week of the M.B.A. program's first-year student orientation in August 2002 until the completion of the winter term in February 2003. The researcher recruited participants through a verbal and written presentation during a mandatory orientation meeting. Students were allowed to ask questions regarding the presentation. Individuals who agreed to participate read and signed the appropriate informed consent document and completed the demographics questionnaire and interpersonal flexibility measure prior to team assignments. The team conflict, member satisfaction, member commitment, and team effectiveness scales were administered prior to a required team dynamics course for first-year M.B.A. students. Responses to the scales were collected at four separate time points, spaced approximately two weeks apart during the 11-week 2002 winter term.

Setting

The general setting for this research was a large southwestern public university. Participants were enrolled as first-year students within the 16-month M.B.A. program housed in the business school of the university. Recruitment of participants was conducted through a brief verbal and written solicitation during a mandatory orientation meeting held within a large lecture hall at the business school. Individuals who volunteered for participation completed the demographics questionnaire and Battery of Interpersonal Capabilities within the same lecture hall. Administration of the

longitudinal measures occurred within a small classroom located in the same business school prior to a required first-year cohort course during the 2002 winter term.

Independent Variables

Interpersonal flexibility was the primary variable utilized in the prediction of team conflict and team outcome variables. Individual and team-levels of interpersonal flexibility were measured during the initial stages of data collection using the *Battery of Interpersonal Capabilities* (Paulhus & Martin, 1987). The Difficulty, Anxiety, and Avoidant scales from the *Battery of Interpersonal Capabilities* (BIC) were not utilized as variables within the present investigation. Finally, demographics variables including age, gender, ethnicity, and experience within a work team environment were examined in relation to the process variables.

Dependent Variables

Several team-level variables were measured over time. Consistent with previous research, team conflict was conceptualized as comprised of task and relationship components. In addition, the task and relationship conflict subscales were aggregated at each time point to form a total conflict subscale. Member commitment to the team, member satisfaction with their team, and member evaluation of team effectiveness were also measured at each time point. An overall team performance rating was gleaned for the teams from an expert rater pre-assigned by program faculty to evaluate the teams' final projects and presentations.

Measures

Demographics Questionnaire. Demographic information of interest for the present investigation was gathered utilizing a questionnaire based on demographic information examined in numerous related studies. The demographics questionnaire was constructed specifically for the present investigation and appears in Appendix B.

Battery of Interpersonal Capabilities. The Battery of Interpersonal Capabilities (BIC) is a self-report inventory designed to assess a wide variety of interpersonal capabilities utilizing the sixteen attributes of the interpersonal circumplex as the domains of interests. Paulhus and Martin (1987) developed the BIC as a measure of functional capability for enacting a wide spectrum of interpersonal behaviors. The inventory assesses manifest interpersonal behavior and the discomfort related to performing the behavior. The BIC consists of four scales labeled the Functional Flexibility Index (FFI), the Difficulty Index, the Anxiety Index, and the Avoidance Index. The indices are derived from participants rating their capability of enacting each of the sixteen attributes of the circumplex on a 7-point Likert scale in response to four questions. The FFI is determined from responses to the global question, for example, "How capable are you of being dominant when the situation requires it?". Difficulty is assessed from responses to the question, "How difficult is it for you to perform the behavior (e.g., dominate), even when the situation requires it?". The Anxiety Index is derived from responses to the question, "How much anxiety do you experience when performing the behavior (e.g., dominate), even when you know the situation requires it?". Avoidance is constructed from responses to the question, "What is your tendency to

avoid situations demanding that you perform the behavior (e.g., dominate)?". The Functional Flexibility Index was the only BIC scale utilized in the present investigation.

The BIC was developed and demonstrated to be psychometrically sound across six separate studies reported in two articles. Paulhus and Martin (1988) conducted a factor analysis with the four BIC indices and four existing measures of interpersonal variability. The BIC indices loaded on Factor 1 while the other six measures loaded on Factors 2 and 3. Paulhus and Martin (1988) concluded that the factor analysis supported the convergent and discriminant validity of the functional flexibility construct measured by the four indices of the BIC. Criterion validation for the BIC was established by comparing participants' responses on the BIC to separate peer ratings of the participants' degree of interpersonal flexibility. An overall mean alpha of .81 for all four BIC scales and .85 for the Functional Flexibility Index was reported (Paulhus and Martin, 1988). For the present investigation, the mean alpha reliability estimate was .70 for the four BIC scales. Coefficient alpha was .79 for the Functional Flexibility Index.

Conflict Scale. Consistent with previous research, levels of relationship and task conflict were measured utilizing the Intragroup Conflict Scale. The 8-item instrument consists of a total conflict scale and two conflict subscales labeled relationship and task. Each subscale is represented by 4 aggregated items that ask respondents to rate the amount of conflict that currently exists within their work unit on a 5-point Likert scale anchored by 1 = "None" and 5 = "A lot". For example, relationship conflict is the sum of the four relationship conflict items. The total conflict scale is derived from aggregating the relationship and task conflict subscales. Jehn and Chatman (2000) reported .90 and

.88 coefficient alphas for the relationship and task scales, respectively. In addition, several factor analytic evaluations with oblique rotation have been conducted that demonstrate the relationship and task items form statistically separate scales (Amason, 1996; Amason & Sapienza, 1997; Janssen, Van de Vliert, & Veenstra, 1999; Jehn & Chatman, 2000; Shah & Jehn, 1993). In the present investigation, the coefficient alphas for the relationship conflict scale scores across the four time points were .89, .87, .81, and .82 respectively. The task conflict scales scores coefficient alphas were .84, .85, .80 and .80 for the task conflict scale scores.

Four team outcome items were added to the ICS to form a modified instrument for the present investigation. Two of the four items were adapted from Jehn and Chatman (2000) and ask respondents to rate their level of commitment to their respective team. One of the final two items assesses team members' satisfaction with the team, while the other asked members to rate their teams' effectiveness. The commitment, satisfaction, and effectiveness items have all been utilized in previous research as measures of team outcome. A more thorough description of the items follows.

Member Commitment. The level of member commitment to team was assessed with the 2-item commitment scale adapted from Jehn and Chatman (2000). Respondents rate the commitment items, 'I am committed to this work team' and 'If given the opportunity, I would continue working in this team', on a 7-point Likert scale ranging from 1 = 'Strongly disagree' to 7 = 'Strongly agree'. Member commitment is the sum of the two commitment items. Jehn and Chatman (2000) reported an average Cronbach

coefficient α of .78 for the commitment scale. In this investigation, commitment scale scores across the four measurement points yielded coefficient α of .76, .77, .78, and .91, respectively.

Member Satisfaction. Satisfaction with team membership was measured with the satisfaction question borrowed from Shah and Jehn (1993). The scale asked respondents to rate their level of satisfaction with their team membership on a 5-point Likert scale anchored by 1 = "Not at all satisfied" and 5 = "Completely satisfied". The satisfaction scale has been demonstrated to yield scores with an average coefficient α of .91 (Jehn & Chatman, 2000).

Team Performance. Team members evaluated their team's effectiveness on a single item effectiveness scale adapted from Jehn and Chatman (2000). Respondents were asked to rate their respective team's current level of effectiveness on a 7-point Likert scale ranging from 1 = 'Not at all effective' to 7 = 'Very effective'.

An outside rating of the M.B.A. teams' final project presentation was garnered from an expert rater. M.B.A. program faculty pre-assigned the expert rater, another faculty member from the same business school with a background in organizational communication and development, to evaluate the teams' final projects. Teams were rated on organization of the presentation, manifest team cohesion while presenting, and overall presentation quality. Ratings of each domain were aggregated to form an overall team performance scale ranging from 3 to 30. In the present investigation, coefficient α was .85 for the external team ratings.

Adapted Critical Incident Questionnaire. Drawing from the Critical Incident Technique described by Flanagan (1954), qualitative information regarding the most important group events from one measurement point to the next was gathered for descriptive purposes. The Critical Incident Questionnaire (CIQ) described by Kivlighan and Goldfine (1991) was adapted for use in the present study. The Adapted CIQ consisted of the following three items: "1) Of the events which occurred in this weeks meetings, which one do you feel had the most impact on the team?" 2) "Describe the event: the circumstances immediately preceding it, what actually took place, the group members involved, and your own reaction. 3) Why did it have the most impact on the team?". Information gleaned from the Adapted CIQ was utilized for descriptive purposes only and is not explicitly analyzed in the present investigation.

Procedure

Participants were recruited during an orientation meeting for first-year M.B.A. students one week prior to commencement of the 2002 fall term. A brief description of the project rationale, potential value of results to the scientific community, and informed consent document were verbally presented. In order to avoid coercion, participants were not offered payment or other compensation. A copy of the Informed Consent Document (see Appendix A) was given to all first-year M.B.A. students present at the orientation meeting. An additional packet that included a second copy of the Informed Consent Document, a demographics questionnaire, and the Battery of Interpersonal Capabilities questionnaire was also given to each student. Individuals willing to participate were instructed to read and sign one copy of the Informed Consent Document, complete the

demographics and Battery of Interpersonal Capabilities questionnaires, and return the entire completed packet to the researcher. Participants were encouraged to keep the second copy of the Informed Consent Document for their personal records. Following the administration of the demographics questionnaire and the Battery of Interpersonal Capabilities, participants began the 2002 fall term coursework functioning in pre-assigned project teams. No data was collected during this term. At the conclusion of the fall term, participants formed new project teams based on pre-assignments by M.B.A. program faculty. Data collection resumed two weeks into the 2002 winter term.

Approximately three-months following the pretest data collection (demographics and BIC), participants were administered the Adapted Intragroup Conflict Scale prior to a required team dynamics course for first-year M.B.A. students. The adapted version of the Intragroup Conflict Scale was administered at four time points, spaced approximately two and half weeks apart during the 12-week 2002 winter term. An adapted version of the Critical Incidents Questionnaire (CIQ) employed by Kivlighan and Goldfine (1991) was utilized to gather additional qualitative information for descriptive purposes only at each measurement point. The expert rater evaluated the teams' final projects and presentations during the last week of the winter term.

CHAPTER IV

RESULTS

The longitudinal nature of the present investigation led to missing data for multiple participants across various time points. Missing data was 23.7% across the twenty-four variables of interest in the investigation. Because the missing data limited the type of statistical analyses that could be conducted in the study, a decision was made to compute estimates of the missing data points. Several procedures for handling missing data have been elucidated in the literature. For this study, the multiple imputation procedure for incomplete multivariate data described by Schafer (1997) was utilized to generate statistical estimates of missing data. Using the EM algorithm computation followed by the Data Augmentation procedure, the NORM computer program (Schafer, 1999) generates estimates of missing data based on the normal distribution. The Data Augmentation procedure uses an iterative process to impute estimates for the missing data based on the existing data. Five new data sets with complete data were generated. All analyses were computed across each of the five data sets. As is customary when utilizing NORM, the effect estimates and p-values reported in the text reflect the median results across the five data sets. The tables coinciding with Pearson's product-moment correlation analyses also include the range of correlation coefficients.

All hypotheses were tested separately at the individual and team-levels. Team-level data was generated through an aggregation process whereby a team's score on a particular variable is the sum of the individual team members' scores for that variable.

For example, the interpersonal flexibility of a team was determined by aggregating individual member flexibility scores. Process variables were calculated in the same manner. Because the number of members in each team varied, the aggregated team variables were transformed into z-scores to allow for equal comparisons across teams of unequal size. Descriptive data for all variables of interest at both the individual and team-level appear in Tables 1 – 4.

Table 1

Individual-level Conflict Variables Descriptive Data

Variable	Time	Mean	Mean Range	Standard Deviation	Standard Deviation Range
Relationship Conflict	1	7.65	7.27 to 8.24	4.42	3.85 to 4.96
Relationship Conflict	2	7.59	7.42 to 7.88	3.93	3.67 to 4.33
Relationship Conflict	3	6.37	5.83 to 6.82	3.24	2.53 to 3.94
Relationship Conflict	4	7.61	7.34 to 8.02	3.28	2.86 to 3.67
Task Conflict	1	9.43	9.00 to 10.01	3.66	3.42 to 4.13
Task Conflict	2	10.75	10.40 to 11.50	6.03	3.99 to 12.88
Task Conflict	3	8.45	8.00 to 8.78	3.78	3.02 to 4.26
Task Conflict	4	8.94	8.83 to 9.07	3.59	3.36 to 3.94
Total Conflict	1	17.07	16.35 to 18.25	6.63	6.23 to 7.71

Table 1 (continued)

Variable	Time	Mean	Mean Range	Standard Deviation	Standard Deviation Range
Total Conflict	2	18.34	18.08 to 19.38	9.08	7.16 to 15.42
Total Conflict	3	14.82	13.84 to 15.61	6.49	4.91 to 7.70
Total Conflict	4	16.55	16.19 to 17.09	6.03	5.46 to 6.51

Note. $n = 102$.

Table 2

Individual-level Outcome Variables Descriptive Data

Variable	Time	Mean	Mean Range	Standard Deviation	Standard Deviation Range
Commitment	1	11.56	11.31 to 11.67	2.73	2.45 to 2.94
Commitment	2	11.20	10.88 to 11.64	3.94	3.10 to 5.34
Commitment	3	10.59	10.51 to 10.69	3.87	3.77 to 4.04
Commitment	4	10.20	9.83 to 10.37	3.92	3.54 to 4.25
Satisfaction	1	4.11	4.05 to 4.15	.97	0.91 to 1.02
Satisfaction	2	3.94	3.76 to 4.06	1.84	1.13 to 4.16
Satisfaction	3	3.99	3.91 to 4.06	1.26	1.19 to 1.43

Table 2 (continued)

Variable	Time	Mean	Mean Range	Standard Deviation	Standard Deviation Range
Satisfaction	4	3.80	3.71 to 3.87	1.23	1.17 to 1.18
Effectiveness	1	5.76	5.71 to 5.80	1.06	1.04 to 1.12
Effectiveness	2	5.36	5.24 to 5.46	1.62	1.57 to 1.71
Effectiveness	3	5.34	5.27 to 5.40	1.75	1.68 to 1.85
Effectiveness	4	5.33	5.13 to 5.47	1.61	1.51 to 1.74

Note. $n = 102$.

Table 3

Team-level Conflict Variables Descriptive Data

Variable	Time	Mean	Mean Range	Standard Deviation	Standard Deviation Range
Relationship Conflict	1	28.82	31.65 to 33.8	11.83	9.22 to 13.66
Relationship Conflict	2	29.89	31.95 to 35.00	12.71	11.53 to 13.22
Relationship Conflict	3	23.46	25.05 to 29.15	8.69	6.00 to 10.69
Relationship Conflict	4	30.14	32.90 to 35.05	12.53	11.18 to 14.44

Table 3 (continued)

Variable	Time	Mean	Mean Range	Standard Deviation	Standard Deviation Range
Task Conflict	1	35.76	41.10 to 43.20	11.75	11.08 to 12.85
Task Conflict	2	42.24	45.65 to 52.55	18.02	14.52 to 28.72
Task Conflict	3	31.61	35.50 to 38.70	10.64	9.34 to 11.71
Task Conflict	4	34.25	39.30 to 41.25	11.03	9.58 to 11.99
Total Conflict	1	64.04	73.50 to 76.20	21.27	18.96 to 24.45
Total Conflict	2	71.95	77.60 to 87.55	29.25	25.03 to 37.22
Total Conflict	3	54.86	60.55 to 67.50	18.33	14.46 to 21.26
Total Conflict	4	63.99	72.15 to 76.30	22.12	19.82 to 24.30

Note. $n = 20$.

Table 4

Team-level Outcome Variables Descriptive Data

Variable	Time	Mean	Mean Range	Standard Deviation	Standard Deviation Range
Commitment	1	42.57	50.30 to 51.35	8.05	7.44 to 8.90
Commitment	2	41.85	48.90 to 50.40	11.17	9.40 to 13.05
Commitment	3	40.27	46.30 to 48.25	11.76	10.57 to 13.17
Commitment	4	38.31	44.65 to 47.45	10.25	9.13 to 11.67
Satisfaction	1	21.08	18.10 to 18.30	2.89	2.75 to 3.17
Satisfaction	3	20.28	17.65 to 18.35	3.83	3.30 to 4.77
Satisfaction	4	19.74	16.45 to 17.55	3.49	3.19 to 3.87
Effectiveness	1	21.08	25.05 to 25.65	3.99	3.82 to 4.11
Effectiveness	2	20.25	23.20 to 24.10	5.46	4.94 to 5.91
Effectiveness	3	20.28	23.60 to 24.35	5.35	4.93 to 5.83
Effectiveness	4	19.74	23.15 to 24.70	5.14	4.51 to 5.41

Note. $n = 20$.

Research Question One: What is the relationship of interpersonal flexibility to team conflict occurrence?

The researcher's first interest was examining the relationship of interpersonal flexibility to the occurrence of team conflict. All General Linear Model (GLM)

analyses, including regression, ANOVA, canonical correlation, and descriptive discriminant analysis are correlational in nature. In other words, each provides similar results, all of which are describing the relationship between measured variables and constructs. In this case, Pearson's product-moment correlation coefficient provided the most concise estimate of the degree of relationship between flexibility scores and ratings of team relationship, task, and total conflict across the four time points. Tables 5-7 display the individual-level median and range of correlation coefficients across data sets pertaining to this question. Team-level results are presented in Tables 8-10.

The individual-level correlations (N = 102) revealed that interpersonal flexibility exhibited an inverse relationship to team conflict across some time points. Interpersonal flexibility was negatively correlated with relationship conflict at Time 2 (median r = -.328). Table 5 displays the median and range of correlation coefficients for relationship conflict and interpersonal flexibility. Less task conflict at Times 2 (median r = -.290) and 4 (median r = -.294) were associated with a greater degree of member interpersonal flexibility (see Table 6). Total conflict levels were negatively related to interpersonal flexibility at Times 2 and 4 (see Table 7). Statistically significant correlations were not exhibited for member interpersonal flexibility and relationship conflict at Times 1, 3, or 4. Similarly, task and total conflict did not exhibit a statistically significant relationship with member interpersonal flexibility at Time 1 or 3.

Table 5

Individual-level Correlations of Flexibility with Relationship Conflict

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median p
Time 1	-.271 to .027	-.170	.088
Time 2	-.462 to -.109	-.328	.000**
Time 3	-.146 to .121	-.123	.219
Time 4	-.368 to -.122	-.127	.205

Note. $n = 102$; ** $p < .01$.

Table 6

Individual-level Correlations of Flexibility with Task Conflict

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median p
Time 1	-.157 to -.019	-.139	.164
Time 2	-.389 to -.164	-.290	.003**
Time 3	-.067 to .110	-.057	.548
Time 4	-.441 to -.204	-.294	.003**

Note. $n = 102$; ** $p < .01$.

Table 7

Individual-level Correlations of Flexibility with Total Conflict

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median p
Time 1	-.254 to -.096	-.164	.099
Time 2	-.516 to .032	-.350	.000**
Time 3	-.126 to -.028	-.028	.444
Time 4	-.447 to -.182	-.242	.014*

Note. $n = 102$; * $p < .05$, ** $p < .01$.

Examination of the first research question at the team-level revealed divergent results. Team-level interpersonal flexibility was negatively correlated with relationship conflict at Time 2 (median $r = -.455$). However, statistically significant findings were not observed for relationship conflict at Times 1, 3, or 4 (see Table 8). Team-level task conflict was negatively related to team interpersonal flexibility at Time 4 (median $r = -.444$). Statistical significance was not achieved for the correlation of team interpersonal flexibility with task conflict at Time 1, 2, or 3 (see Table 9). A similar relationship was observed between total conflict and team interpersonal flexibility. Table 10 displays results for the correlation between total conflict and team interpersonal flexibility.

Interpersonal flexibility was not related to total conflict at Time 1, 2, or 3. However, a statistically significant negative relationship (median r = -.451) was noted between team interpersonal flexibility and total conflict at Time 4.

Research Question Two: What is the relationship of interpersonal flexibility to team outcome?

The second research question examined the relationship of interpersonal flexibility with team outcome variables. Again, Pearson's product-moment correlation coefficient was utilized as a reasonable estimate of the relationship of interpersonal flexibility to team outcome. Member commitment to their team, member satisfaction with their team, and member evaluation of their team's overall effectiveness were each evaluated as indicators of team outcome at the individual and team-levels. In addition, team-level analyses evaluated the degree of relationship between team performance and team interpersonal flexibility.

Table 8

Team-level Correlations of Flexibility with Relationship Conflict

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median p
Time 1	-.307 to .080	-.159	.502
Time 2	-.638 to -.080	-.455	.044*
Time 3	-.520 to .007	-.316	.174
Time 4	-.533 to -.052	-.315	.175

Note. $n = 20$; * $p < .05$.

Table 9

Team-level Correlations of Flexibility with Task Conflict

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median p
Time 1	-.227 to .131	-.139	.559
Time 2	-.305 to .128	-.136	.568
Time 3	.012 to .332	.258	.272
Time 4	-.723 to -.253	-.444	.050*

Note. $n = 20$; * $p < .05$.

Table 10

Team-level Correlations of Flexibility with Total Conflict

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median p
Time 1	-.336 to .018	-.180	.448
Time 2	-.587 to .023	-.361	.118
Time 3	-.261 to .218	-.048	.613
Time 4	-.721 to -.270	-.451	.046*

Note. $n = 20$; * $p < .05$.

Table 11

Individual-level Correlations of Flexibility with Commitment

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median p
Time 1	.048 to .262	.162	.129
Time 2	.024 to .487	.365	.000**
Time 3	.005 to .205	.098	.329
Time 4	.071 to .253	.186	.061

Note. $n = 102$; ** $p < .01$.

Interestingly, member interpersonal flexibility exhibited a less consistent but positive relationship to member ratings of team outcome variables at the individual-level. Greater interpersonal flexibility was associated with higher levels of team commitment at Time 2 (median r = .365), but not at Times 1, 3, or 4 (see Table 11). Increased satisfaction with team membership at Times 2 (median r = .385) and 3 (median r = .326) were associated with a higher degree of interpersonal flexibility. However, satisfaction ratings at Times 1 and 4 had no relationship to member interpersonal flexibility (see Table 12). Member evaluation of their team's level of effectiveness revealed a statistically significant positive relationship with interpersonal flexibility at Time 2 (median r = .237). Effectiveness ratings at Time 1, 3, and 4 were not correlated with interpersonal flexibility at the individual-level (see Table 13).

Table 12

Individual-level Correlations of Flexibility with Satisfaction

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median p
Time 1	.141 to .434	.385	.000**
Time 2	.243 to .545	.326	.001**
Time 3	-.005 to .197	.155	.121
Time 4	-.066 to .137	-.046	.512

Note. $n = 102$; ** $p < .01$.

Table 13

Individual-level Correlations of Flexibility with Effectiveness

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median p
Time 1	.096 to .259	.185	.062
Time 2	.069 to .447	.237	.017*
Time 3	.097 to .279	.153	.124
Time 4	-.048 to .097	.021	.632

Note. $n = 102$; * $p < .05$.

Team-level evaluation of the second research question conceptualized team outcome as team commitment, team satisfaction, team effectiveness, and external team performance ratings. Team-level interpersonal flexibility was not associated with team commitment or effectiveness at any of the four measurement points. Moreover, there was no statistically significant connection between team performance and team interpersonal flexibility. Satisfaction was the only process variable related to interpersonal flexibility at the team-level. The correlation coefficients pertaining to the relationship of team-level interpersonal flexibility to member satisfaction are displayed in Table 14. Flexibility was positively related to satisfaction at Time 1 (median $r = .509$) and Time 2 (median $r = .624$). A statistically significant relationship between interpersonal flexibility and team effectiveness was not observed.

Table 14

Team-level Correlations of Flexibility with Satisfaction

Measurement Points	Correlation Coefficient Range	Median Correlation Coefficient	Median *p*
Time 1	.308 to .727	.509	.022*
Time 2	.344 to .795	.624	.003**
Time 3	-.095 to .303	.245	.298
Time 4	-.155 to .181	.115	.515

Note. $n = 20$; * $p < .05$, ** $p < .01$.

Research Question Three: To what extent does interpersonal flexibility predict team conflict occurrence?

The third research question sought to evaluate interpersonal flexibility as a predictor of team conflict occurrence at the individual and team-level. One-way analysis of variance was performed to determine whether participants or teams with higher levels of interpersonal flexibility experienced less relationship, task, or total conflict at times 2 and 4 as compared to low flexibility participants or teams. For this purpose, participants were re-assigned to a high or low flexibility group based on their respective interpersonal flexibility scores. A cutpoint score of 56 on the BIC Functional Flexibility Index was utilized as the criteria for assigning participants to high and low flexibility groups. A rating of '4' (the midpoint for the 7-point Likert scale) for each of the sixteen

FFI items would result in an overall flexibility score of 64 and could be considered an average level of interpersonal flexibility. Therefore, a flexibility score falling below 56 should adequately differentiate between high and low flexibility participants.

Times 2 and 4 were of focus because each of these measurement points preceded external project deadlines. Extrapolating from the theoretical and research literature on group development that suggest groups experience temporal phases of activity and inactivity strongly influenced by external pressures (i.e., deadlines), it was hypothesized that increased activity coupled with pressure to meet deadlines would foster conflict emergence. Consistent with previous analyses, each ANOVA was conducted across the five data sets. Median results for individual-level evaluation of the third research question are reported in Table 15.

Analysis of variance with time 2 relationship conflict as the dependent variable revealed a statistically significant effect (median η^2 = .08) with the following difference (see Table 12): Participants in the high flexibility group had a lower relationship conflict mean (M = 7.30; SD = .458) as compared to low flexibility group mean (M = 10.42 ; SD = .957). High and low flexibility participants did not differ on relationship conflict at time 4.

Table 15

Individual-level ANOVA Results with Flexibility Group Factor

Dependent Variable	df	Median F	Median p	Median η^2
Time 2 Relationship Conflict	1	8.648	.01	.080
Time 2 Task Conflict	1	4.398	.05	.042
Time 4 Task Conflict	1	4.251	.05	.041
Time 2 Total Conflict	1	6.700	.01	.063
Time 4 Commitment	1	11.342	.001	.102
Time 2 Satisfaction	1	5.790	.01	.055

Note. $n = 102$.

Table 15 presents ANOVA results with task conflict at times 2 and 4 as dependent variables. The difference between the high flexibility group's mean (M = 10.24; SD = 1.39) and low flexibility group's mean (M = 17.0; SD = 2.90) for task conflict at time 2 was statistically significant (median $\eta^2 = .042$). High flexibility participants experienced a lower mean rating of task conflict (M = 8.55; SD = .380) at time 4 as compared to the low flexibility participants (M = 10.36; SD = .794).

Analysis of variance results with total conflict at time 2 as the dependent variable revealed a statistically significant effect ($\eta^2 = .063$) for group membership with the following difference (see Table 12): High flexibility participants experienced a lower total conflict (M = 17.54; SD = 1.64) at the second measurement point as

compared to low flexibility participants (M = 27.42; SD = 3.44). A statistically significant difference for high and low flexibility participants for total conflict at time 4 was not observed.

The third research question was also evaluated at the team-level. Teams were assigned to high and low flexibility groups utilizing the same procedure described above for individual participants. However, the small number of teams (N = 20) available for team-level analyses necessitated the use of the median team flexibility score as the cutpoint value for assigning teams to high and low flexibility groups. Segregation of teams based on the median team flexibility score provided an equal number of teams in the high and low flexibility groups. Table 16 contains median results for team-level analyses.

Comparison of low and high flexibility teams on their respective group means for relationship conflict at time 2 revealed a statistically significant effect (η^2 = .211) with the following difference (see Table 16): High flexibility teams experienced less relationship conflict (M = -.424; SD = .273) at time 2 as compared to low flexibility teams (M = .424; SD = .273). Similarly, a statistically significant effect (η^2 = .191) was observed for high and low flexibility groups on relationship conflict at the fourth measurement point (see Table 16). The high flexibility teams relationship conflict mean (M = -.403; SD = .276) was less than that of the low flexibility teams (M = .403; SD = .276).

Table 16

Team-level ANOVA Results with Flexibility Group Factor

Dependent Variable	df	Median F	Median *p*	Median η^2
Time 2 Relationship Conflict	1	4.816	.05	.211
Time 4 Relationship Conflict	1	8.368	.05	.191
Time 4 Task Conflict	1	4.246	.01	.273
Time 4 Total Conflict	1	6.769	.01	.319
Time 2 Satisfaction	1	8.446	.01	.317

Note. $n = 20$.

Analysis of variance was conducted to compare the time 4 task conflict means for high and low flexibility teams. A statistically significant effect (median $\eta^2 = .273$) was noted (see Table 16). The high flexibility group ($M = -.482$; SD = .262) reported less task conflict at time 2 as compared to the low flexibility group mean ($M = .482$; SD = .262). The comparison of high and low flexibility teams' total conflict means at time 2 was statistically significant (median $\eta^2 = .319$, see Table 16). High flexibility teams ($M = -.521$; SD = .254) experienced less total conflict at time 2 than low flexibility teams ($M = .521$; SD = .254). High and low flexibility teams did not differ significantly.

Research Question Four: To what extent does interpersonal flexibility predict team outcome?

The fourth research question was concerned with evaluating interpersonal flexibility as a predictor of team outcome at both the individual and team-levels. Toward this end, a series of one-way analyses of variance were conducted to determine whether participants or teams with higher levels of interpersonal flexibility experienced more positive team outcomes at times 2 and 4 as compared to less interpersonally flexible participants or teams. The same grouping procedure implemented for research question three was utilized to assign participants and teams to high and low flexibility groups for evaluation of the fourth question.

Individual-level analysis of variance was conducted to evaluate the time 2 commitment means for high and low flexibility participants. The difference between the high flexibility group's mean (M = 11.44; SD = .388) and the low flexibility group's mean of (M = 8.42; SD = .810) on time 2 commitment was statistically significant (median η^2 = .273; see Table 15). In addition, a statistically significant difference (median η^2 = .273) was also noted for satisfaction at time 2 (see Table 15) indicating that the high flexibility group (M = 4.12; SD = .144) experienced more satisfaction than the low flexibility group (M = 3.31; SD = .302). High and low flexibility groups did not differ on commitment at time 4, satisfaction at time 4, or effectiveness at times 2 and 4.

Analyses of variance were conducted to address the fourth research question at the team-level. Table 16 displays results indicating that the high flexibility teams' mean satisfaction rating at time 2 (M = .533; SD = .251) was significantly greater (median η^2

= .273) than the low flexibility teams' mean satisfaction rating (M = -.533; SD = .251). Commitment at times 2 and 4, satisfaction at time 4, effectiveness at time 2 and 4, and team performance did not differ significantly according to flexibility group membership.

Research Question Five: What is the trajectory of the team conflict and team outcome variables over time based on member interpersonal flexibility?

The fifth research question addressed the interaction of time with each of the six process variables (relationship conflict, task conflict, total conflict, member commitment to team, member satisfaction with team, member evaluation of team effectiveness). For this purpose, member interpersonal flexibility was utilized as a grouping variable. Participants' were regrouped into quintiles based on their respective BIC Flexibility Index score and assigned to the high, moderate-high, moderate, moderate-low, or low flexibility groups. Table 17 displays the mean flexibility score for each flexibility quintile group. The General Linear Model repeated measures procedure in SPSS was used to compare each groups' trajectory for each of the six process variables across the four measured time points.

Table 17

Quintile Flexibility Means and Standard Deviations for Individuals

Flexibility Quintile Group	Mean	Standard Deviation
1 Low	43.57	13.43
2 Moderate-Low	61.97	2.57
3 Moderate	69.97	2.34
4 Moderate-High	78.14	2.66
5 High	93.43	8.15

Note. $n = 102$.

Evaluation of the main effects for relationship, task, and total conflict revealed no statistically significant variation in the variable means across quintile groups. Main effects were not statistically significant for the commitment and effectiveness mean ratings at the four measured time points. However, a modest statistically significant main effect interaction for the satisfaction by time was discovered (Hotelling's Trace = .07; $p < .05$).

The next step in the repeated measure analysis when statistically significant main effects are discovered is to examine the within-subjects contrasts to determine the shape of the regression line. The linear within-subjects contrast for the satisfaction-time interaction was statistically significant ($\eta^2 = .106$; $p < .02$), indicating that a statistically significant difference in the trajectory of the satisfaction variable existed between some

or all flexibility quintile groups. The final step in the GLM repeated measure procedure is to determine the predicted satisfaction regression values for each group separately and visually compare the groups based on a graph of the values. Figure 2 displays a graph of the predicted values for each quintile group.

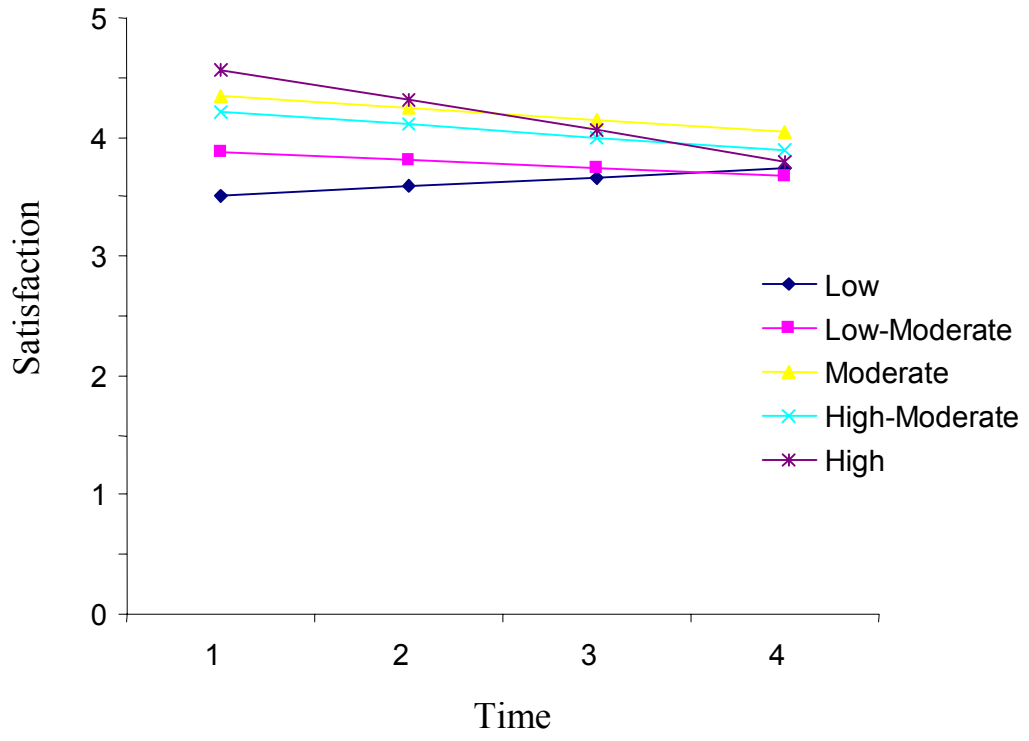

Figure 2. Quintile Group Predicted Values for the Satisfaction x Time Interaction.

CHAPTER V

SUMMARY AND CONCLUSION

Discussion

The present study was a longitudinal field investigation that collected data utilizing survey methods. Participants were 102 first-year M.B.A. students enrolled at a large southwestern university. The M.B.A. Program required all first-year students to have the experience of working in project teams during the initial year in the program. All first-year students were assigned to one of twenty teams. These teams were the focus of the present investigation. Survey instruments were administered prior to and over the course of the M.B.A. Program's winter term.

Research Question One: What is the relationship of interpersonal flexibility to team conflict occurrence?

The first question addressed the relationship of interpersonal flexibility to the occurrence of team conflict at both the individual and team-level. Based on the theoretical literature it was hypothesized that interpersonal flexibility would exhibit a negative correlation with team conflict. Overall, results at the individual and team-level offered only partial support for the first hypothesis. The correlational analyses revealed that interpersonal flexibility was negatively associated with conflict for some measurement points. Specifically, at the individual-level low interpersonal flexibility scores were associated with higher levels of relationship conflict at the second measurement point and task and total conflict at times 2 and 4. Task and total conflict at times 1 and 3 were not correlated with interpersonal flexibility at the individual-level.

Similarly, interpersonal flexibility was not associated with relationship conflict at times 1, 3, or 4. Evaluation of the first research question at the team-level yielded somewhat divergent results. Interpersonal flexibility was negatively correlated with relationship conflict at time 2, task conflict at time 4 and total conflict at time 4. However, team-level interpersonal flexibility was not associated with conflict at the other points in time.

The timing of data collection offers one potential explanation for results related to interpersonal flexibility and conflict. Measurement point 1 took place early in the life of each team. In fact, teams had only been formed two weeks prior to the first administration of the adapted conflict scale. Perusal of the complementary qualitative data corresponding to Time 1 revealed that most team meetings early in the team life cycle were informal and revolved around team members becoming familiar with each other. As a result, many teams had not begun substantive work on projects prior to the first measurement point. Likewise, the third measurement point followed a two-week holiday break. Teams had completed mid-term projects approximately four weeks earlier. Qualitative questionnaires revealed that teams had not met more than one time since the break concluded and no team had begun focused work on final projects when the conflict questionnaire was administered for the third time. A lack of familiarity with each other during early stages of group formation and fewer opportunities for interaction during the later stages in the life of each team most likely contributed to low levels of conflict at the first and third time points.

The group development stage model described by Tuckman (1965) offers another potential explanation for these results. According to Tuckman's model, group

members becoming familiar with each other characterize the early formation stage. Consistent with the second stage of group development, storming, increases in conflict are a natural segment of group interaction soon after formation. For the present data, the second time point was approximately four weeks into the life of the teams. It is likely that the initial forming stage had concluded by the second time point thus ending the "honeymoon" period. It is not surprising that conflict would be more pronounced at the second time point when the teams, more focused on the task at hand, would naturally move toward establishing a method for working together effectively. However, it is interesting that conflict was experienced at a higher rate for individuals with low flexibility scores during this second stage.

Gersick's (1988, 1989) punctuated equilibrium model of group development also seems to shed light on the timing of conflict in this investigation. Gersick described groups as experiencing temporal phases of activity and inactivity that are dependent on time demands (i.e., deadlines). Extrapolating from Gersick's theoretical model of group development, one could expect the teams sampled in this study to experience higher levels of activity during week four (time 2) and week eleven (time 4) given their project deadlines at midterm and the final week of the winter term. Increased interactions among team members focused on project completion coupled with the inherent pressure created by external time demands necessarily increases the probability of conflict occurrence. In other words, conflict was more likely to be reported at times 2 and 4 because the project deadlines imposed on all teams compelled the members to interact more frequently in the weeks leading up to the measurement points. Increased contact

among team members combined with stress generated from external deadlines provides fertile ground for conflict emergence. Therefore, the absence of association between interpersonal flexibility and conflict at times 1 and 3 is likely the result of low levels of conflict for these measurement points.

Research Question Two: What is the relationship of interpersonal flexibility to team outcome?

The next research question explored the association between interpersonal flexibility and team outcome indicators (i.e., member commitment, member satisfaction, member evaluation of team effectiveness, and team performance). Again, analyses were conducted at the individual and team-level. It was hypothesized that a positive correlation would exist between flexibility and team outcome. Consistent with the results pertaining to the first research question, the second hypothesis received only partial support.

Individual-level analyses revealed that interpersonal flexibility scores were positively correlated to commitment and effectiveness at time 2 and satisfaction at times 2 and 4. However, commitment levels and member evaluation of their team's effectiveness at times 1, 3, and 4 were not associated with flexibility. Likewise, member satisfaction with their teams at times 3 and 4 were not related to participant flexibility scores. Team-level analyses of the degree of relationship between interpersonal flexibility and team outcome were less encouraging. Only satisfaction at times 1 and 2 was positively associated with team interpersonal flexibility. Commitment, satisfaction

at times 3 and 4, effectiveness, and team performance were not related to team interpersonal flexibility.

The association of interpersonal flexibility to team outcome variables within this investigation can be best understood by considering the types and levels of conflict at each time point. At the individual-level, positive correlations of interpersonal flexibility with commitment, satisfaction, and effectiveness occurred at the same time points as the negative correlations with conflict. Indeed, these findings are not altogether surprising given the negative relationship of conflict occurrence to commitment, satisfaction, and evaluation of team effectiveness documented in previous investigations. However, interpersonal flexibility was not related to team outcome variables other than satisfaction at time 4 despite its negative correlation with task and total conflict at the fourth measurement point. One potential explanation for this finding is that task conflict has less impact on member commitment, satisfaction, and evaluation of team effectiveness than relationship conflict. In addition, higher levels of total conflict do not negatively impact team outcome when task rather than relationship conflict accounts for a greater ratio of the total conflict variable. The stronger association of flexibility with satisfaction at the first time point can be explained by the assumption of interpersonal theory that interpersonally flexible individuals are more suited to adapt across a diverse range of situational contexts including work teams.

The team-level correlations of interpersonal flexibility are somewhat divergent from the individual-level. Specifically, the only team outcome variable associated with interpersonal flexibility was satisfaction at times 1 and 2. As a result, an absence of

theory development in this domain limits how the present study results may be understood. Nevertheless, it is clear that a higher degree of team interpersonal flexibility was negatively associated with team conflict and positively related to satisfaction at some points in time.

Research Question Three: To what extent does interpersonal flexibility predict team conflict occurrence?

Research questions three and four were concerned with comparisons of high and low flexibility participants and teams on team conflict and outcome variables at times 2 and 4. For this purpose, participants at the individual-level and teams at the team-level were assigned to high and low flexibility groups based on their respective flexibility scores.

The third research question focused on differences in conflict means across the high and low flexibility teams. The third hypothesis, high flexibility participants and teams will experience lower levels of conflict at times 2 and 4, received only partial support. At the individual-level, the task conflict means for times 2 and 4 were lower for the high flexibility group. In addition, the high flexibility group exhibited lower means for relationship and total conflict at time 2. However, high and low flexibility groups did not differ substantially on relationship or total conflict at time 4. Analyses conducted at the team-level revealed that high flexibility teams had lower mean ratings for relationship conflict at times 2 and 4, task conflict at time 4, and total conflict at time 4. However, notable differences were not observed for the high and low flexibility teams on task and total conflict at time 2.

Overall, the team and individual-level analyses for the third research question suggest that team-level interpersonal flexibility does possess a small to moderate degree of predictive power in regards to conflict occurrence early and late in the life of a team. However, contradictory results for the team and individual-level are difficult to understand. A probable explanation is that the individual and team-levels are related but separate data sets. In addition, the small number of teams available for inclusion in the investigation resulted in use of differing cutpoint values for segregating participants and teams into high and low flexibility groups, thus further differentiating team and individual-level analyses.

Research Question Four: To what extent does interpersonal flexibility predict team outcome?

The fourth research question was concerned with the differences in team outcome means at times 2 and 4 for low and high flexibility participants and teams. It was hypothesized that the high flexibility participants and teams would enjoy more positive team outcome, however, results provided only partial support. In addition, individual and team-level analyses of this question yielded divergent results. At the individual-level, the high flexibility group had lower task conflict means at times 2 and 4. Similarly, lower means for relationship and total conflict at time 2 were observed for the high flexibility group. However, high and low flexibility groups did not differ notably for relationship or total conflict at the fourth time point. Analyses conducted at the team-level demonstrated that the high flexibility group recorded lower mean scores for relationship conflict at times 2 and 4, as well as for task and total conflict at the

fourth measurement point. Statistically significant differences between high and low flexibility teams were not observed for task or total conflict at time 2.

The study results suggest that the predictive power of interpersonal flexibility in respect to team outcome variables is limited. One possible explanation for these results is the nature of the interpersonal flexibility construct. Interpersonal flexibility as measured in this investigation is based on the interpersonal circumplex model, which attempts to understand interpersonal behaviors. Although conflictual interactions are at the heart of the circumplex, the team outcome variables measured in this study are less related. As a result, interpersonal flexibility may only be useful in predicting conflict occurrence and is only related to team outcome variables in so much as these variables relate to conflict. However, no definitive explanation for the discrepancy between team and individual-levels of analysis seems to exist for the study results. The team conflict literature provides little basis for understanding how interpersonal flexibility may influence the work and success of teams.

Research Question Five: What is the trajectory of the team conflict and team outcome variables over time based on member interpersonal flexibility?

The final research question of interest considered the interaction of time with the conflict and team outcome variables. It was hypothesized that the trajectory of these variables across time would vary according to interpersonal flexibility. Participants were divided into five groups based on their flexibility score and the GLM repeated measures procedure was implemented to compare the differential effect of time on conflict and team outcome variables for each group. The trajectories of relationship and task conflict

were not notably different across the five flexibility groups. Similarly, notable differences between groups were not observed for the member commitment and member evaluation of team effectiveness trajectories across the four measurement points.

Conversely, the trajectory of member satisfaction with team membership did vary according to flexibility group membership. Figure 2 reveals that the low flexibility groups' satisfaction regression lines exhibit a different trend than the moderate-low, moderate, moderate-high, and high flexibility groups. Satisfaction for the low flexibility group began at a level below the other four groups and climbed slightly across the four time points. The final satisfaction level at time 4 for this group ended at or below all other groups. The moderate, moderate-high and high flexibility quintile groups' satisfaction regression lines each reveal a downward slope. Surprisingly, the high flexibility group experienced the most significant decrease in satisfaction of all groups. The low-moderate flexibility quintile group had a regression line that remained mostly horizontal across the four measurement points. Interestingly, all groups arrive at approximately the same satisfaction rating by the last measurement point.

One explanation for the lower initial satisfaction ratings for the low flexibility quintile groups is concerned with the experience of conflict. Participants with lower levels of interpersonal flexibility tended to report substantially higher levels of conflict at times 1 and 2 in this investigation. As a result, a lower satisfaction with team membership during a time when one perceives significant levels of conflict is not altogether surprising. At the end of data collection, all teams sampled for this investigation were relatively successful in the completion of assigned projects. One

could hypothesize that the rise in satisfaction for the low flexibility groups may be linked to the resolution of conflict and the meeting of project deadlines.

Interpersonal theory offers another useful explanation for the differences in satisfaction trends across the quintile groups. According to the theory, individuals with a high degree of interpersonal flexibility are likely to feel comfortable interacting in a variety of situational contexts. Keeping with this perspective, interpersonally flexible individuals are likely to adapt to new work teams more quickly and feel more satisfied initially with team memberships than less flexible individuals.

One final way to make sense of the satisfaction trends for low versus higher flexibility groups is concerned with the starting point and ceiling for satisfaction ratings. The more flexible quintile groups' satisfaction ratings were very high initially, leaving little room for satisfaction levels to improve. Conversely, low flexibility quintile groups' satisfaction levels had ample room to improve.

In summary, the present study provides useful new information regarding the previously unexplored domain of interpersonal flexibility and work teams. A connection between interpersonal flexibility and the experience of work team conflict does exist. Interpersonal flexibility was negatively associated with conflict occurrence and positively associated with satisfaction, commitment, and effectiveness. More importantly, interpersonal flexibility seems to explain a small to moderate amount of variance in the conflict and team outcome variables. Specifically, individuals and teams with a higher degree of interpersonal flexibility tend to report lower levels of conflict within their work teams and more satisfaction with their team membership. The present

investigation did not establish a consistent relationship between level of interpersonal flexibility and member commitment or team effectiveness. In addition, team interpersonal flexibility was not demonstrated to be predictive of team performance.

A number of challenges inherent in longitudinal, field research severely limited the explanatory power of this measurement model. Therefore, it would be premature to assume that interpersonal flexibility does not have an important impact on team commitment, effectiveness, or performance. As mentioned previously, interpersonal flexibility is concerned with interpersonal behaviors. Conflict interactions are closely related to the interpersonal behaviors described in the Interpersonal Circumplex Model that was relied on as a foundation for the measurement of interpersonal flexibility within this investigation. Whereas member commitment to the team, satisfaction with team membership, evaluation of team effectiveness, and overall team performance are not as clearly linked to interpersonal behaviors. The work team literature has consistently demonstrated that conflict possesses a strong mostly negative relationship to commitment, satisfaction, effectiveness, and team performance. Extrapolating from this literature and the results generated within the present investigation, it is reasonable to conclude conflict is likely to moderate the relationship between interpersonal flexibility and member commitment to the team, satisfaction with team membership, evaluation of team effectiveness, and overall team performance. Of course, the validity of this conclusion could be easily evaluated within future research.

On a final note, the difference in size of correlation coefficients across individual- and team-level analyses throughout the investigation is worthy of emphasis.

Specifically, team-level results in most cases were substantially larger than those generated from individual-level analyses. This is an important distinction because team-level results represent variability that exists between actual groups. Conversely, the variability identified at the individual-level pertains to differences between artificial groups generated for the purpose of statistical comparison.

Limitations

Internal Validity. The decision to pursue a naturalistic field investigation necessarily precluded control over assignment of participants to teams. Team membership was pre-assigned by the M.B.A. program faculty four months prior to the commencement of the investigation. Similarly, monitoring of interpersonal flexibility and work team conflict within an actual work environment eliminated the possibility of manipulating independent variables. As a result, statements of causality regarding the relationship between interpersonal flexibility and work team conflict are not possible.

Participation in the study was completely voluntary. Participants were not offered reimbursement for their time nor were coercive tactics utilized to induce participation. This combined with the longitudinal nature of the investigation led to numerous points of missing data. The NORM procedure for dealing with missing data was implemented to reduce the occasions of missing data. Although each analysis was conducted with five imputed data sets and median results reported, the resulting data files were statistical approximations of a complete data set. Therefore, conclusions drawn from the investigation should be considered tentative.

External Validity. Consistent with all research investigations, the generalizability of results generated from the present study is limited. Given that sample data was gleaned from first-year M.B.A. students engaged in study teams, generalization of findings to actual work teams within the business domain could be questioned. On the other hand, multiple authors (e.g., Jehn & Mannix, 2001) have argued that study teams are a close approximation of the work teams found across a variety of business settings. Indeed, the participants within this investigation are themselves likely to be managers within future businesses. Moreover, the teams utilized in this study were designed by M.B.A. program faculty to provide students with the experience of functioning within self-directed work teams. Faculty purposefully assigned students to teams with the goal of maximizing heterogeneity across several domains including gender, experience, functional expertise, age, race, and cultural background. It is important to note that employees in actual business settings are usually not randomly assigned to work teams. Rather, team members are hand-selected by managers and often reflect heterogeneity across similar domains. At a minimum, the sample utilized in the present investigation can be described as justifiable.

Measurement Issues. A majority of the measures utilized within the investigation relied on participant self-report. The results generated from these measures represent the participants' view of themselves and their team functioning. Trained observer ratings of group functioning and peer ratings of a participant's interpersonal flexibility would have been an ideal method for triangulating on the variables of interest. The financial and time constraints of the investigation precluded implementation of

these procedures. Although multiple investigations (e.g., Jehn & Chatman, 2000) focused on work teams have utilized similar self-report methods, an important next step in furthering our understanding of interpersonal flexibility and its role in work team conflict would be to include perspectives beyond self-report.

Another measurement issue that may have impacted the present investigation was concerned with the reliability of team performance ratings. Several work team investigations (e.g., Jehn & Chatman, 2000) have relied on manager or customer ratings of team performance based on evaluation criteria identified by the organization. However, the expert ratings of team performance utilized within this study yielded disappointingly low reliability coefficients. In fact, an examination of these ratings revealed that the majority of teams were viewed as high performers. As a result, the team performance ratings varied little across teams. The lack of variability for these ratings limits the amount of credence given to related analytic results. In regards to the measurement of the other variables, it is important to note that the size of a correlation coefficient is limited by the reliability of the scores generated from each measurement instrument (Baugh, 2002; Johnson, 1944). Given that the reliability of scores within the present investigation were adequate but not ideal, there is a distinct possibility that the coefficients produced by the correlation analyses are underestimated.

Statistical Issues. Statistical power issues are often present in team or group research, especially within field settings. Gaining access to a large number of intact, naturally occurring work teams can prove difficult. As a result, analyses focused on team-level data are often lacking in substantial power. In the present investigations, the

low number of available work teams significantly reduced the likelihood of finding differences that may have truly existed.

Implications

The present investigation undertook exploration of previously uncharted territory and revealed that interpersonal flexibility has an important impact on work team functioning and conflict. In fact, uncovering these findings in such a "noisy", uncontrolled environment, so common for field investigations, bolsters the results and highlights the need for further research on interpersonal flexibility as related to business and work team environments. The majority of previous investigations that have examined work teams and conflict ignored the influence of interpersonal factors and only considered the conflict management style of teams and members. Interpersonal theory and the concept of interpersonal flexibility has the potential to add much to our understanding of individual and team-level characteristics that impact work team functioning and success. Future investigations could adopt an experimental design in order to control for extraneous variables and specifically address issues of causality related to interpersonal flexibility, team conflict, and team performance. Examination of member interpersonal flexibility as assessed by fellow team members and expert raters could yield additional insights. Consideration of the other individual or team characteristics such as age, gender, experience, expertise, or cultural background may uncover an important moderating effect of the relationship between interpersonal flexibility and team conflict or outcome.

Temporal influences have long been recognized to exert influences on work group and team functioning. The present investigation identified certain time points that were of importance for both high and low flexibility teams. In particular, interpersonal flexibility appears to exert a more salient influence on team functioning during periods of stress generated by external time deadlines. Additional research examining the moderating effect of time on the flexibility and team functioning relationship should be undertaken to further substantiate these findings and clarify temporal influences.

Interpersonal theory and interpersonal flexibility has the potential to be particularly important in the selection and training of employees. In fact, the interpersonal flexibility of employees could be informative regarding work team assignments or team composition. However, additional research will need to address the usefulness of selecting employees based on interpersonal flexibility scores. Similarly, training for increased interpersonal flexibility could prove to be another fertile ground for research. A myriad of questions related to the connection between team leadership and interpersonal flexibility could also be examined.

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APPENDIX A

PARTICIPANT INFORMED CONSENT DOCUMENT

(M.B.A. Program)

I, _____, am aware that the purpose of the research study
(Printed Name)
conducted by Frank Baugh is to explore aspects of group or team dynamics and the interpersonal styles of individual team members. I understand that participation in the study would entail completion of several short questionnaires to be administered over the course of a 11-week period. I am aware that some questions will request information about and related to my demographic background, personal style of relating to others, project team experience, and personal attitudes or opinions. I also understand that due to the longitudinal nature of the investigation matching the information I supply at different points in time is imperative. Therefore, I will be asked to record the last five digits of my student identification number on all questionnaires that I complete. However, I am aware that no one with access to questionnaires or study forms will have information linking my name or identifying information to my identification number.

I understand that participation in the study will require approximately 25 minutes of my time today, approximately 10 minutes of my time weekly for the 11 weeks of the winter term, and approximately 20 minutes at the conclusion of the 11 week period. The total participation time will be approximately 2.5 hours over the entire semester.

I am aware that there will be approximately 180 individuals asked to participate in this study. These participants will be recruited from the Department of Management. I understand that the data collected in this study will be analyzed and summarized for the completion of a doctoral dissertation. In addition, this information may be presented in the form of conference presentations and written publications. However, all information related to individual subjects will remain confidential. Only general response patterns will be reported.

I further understand that my participation in this study is completely voluntary and that I may refuse participation or withdraw completely at any point in time without penalty. In addition, I understand that I may refuse to answer any questions that make me feel uncomfortable. Neither my grade nor evaluation in MGMT 614 will be adversely impacted by my refusal to participate in the study.

(OVER)

I understand that the investigator will offer general verbal and/or written feedback regarding the study after all data is collected and analyzed. This feedback will be geared toward general trends in the entire participant population. I also am aware that my respective project team as a whole may request and receive team-level feedback after all data has been collected and analyzed. However, information collected from specific individual participants will never be disclosed. I further understand that I will not be paid to participate in this study.

I have read and understand the explanation provided to me and I have had all my questions answered to my satisfaction. I voluntarily agree to participate in this study. I understand that all my responses will be kept confidential. Persons not involved in the development and implementation of this study will not be allowed access to my responses.

I have been given a copy of this consent form.

Printed Name _____

Signature: _____ Date: _____

Principle
Investigator: _____ Date: _____

I understand that this research study has been reviewed and approved by the Institutional Review Board-Human Subjects Research, Texas A&M University. For research related problems or questions regarding participants' rights, the Institutional Review Board may be contacted through Dr. Michael W. Buckley, Director of Support Services, Office of the Vice President for Research at (979) 458-4067.

If you have questions or concerns regarding this study, please contact:

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APPENDIX B

DEMOGRAPHICS QUESTIONNAIRE

Last 5 Digits of Student I.D. _____

PLEASE RESPOND TO ALL OF THE FOLLOWING QUESTIONS BY WRITING IN OR CIRCLING THE APPROPRIATE ANSWER.

Gender: Female Male

Age: _____

Ethnic Group or Race:

Hispanic African-American Latino Caucasian Asian

Other (please specify) _____

Current Classification: Junior Senior Graduate

Degree Currently Sought: Bachelors Masters Doctoral

Current Major/Specialization: _____

Current Overall GPA: _____

Current Employment Status:

Employed Full-time Employed Part-time Unemployed

Number of Months/Years Spent in Full-time Employment: _____

Number of Months/Years Spent in Part-time Employment: _____

Number of Work Teams You Have Been a Member of: _____

Months/Years of Experience Spent in a Work Team Environment: _____

VITA

FRANK GODARD BAUGH
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Education

Ph.D.	Texas A&M University, August 2000 – August 2004. APA Accredited Doctoral Program in Counseling Psychology.
M.S.	University of Southern Mississippi, August 1997 – August 1999. CACREP Accredited Master's Program in Counseling Psychology.
B.S.	William Carey College, August 1993 – May 1997. (Cum Laude) Major: Psychology Minor: Business Administration.

Experience

09/2004 – Present	Postdoctoral Resident, Veterans Health Administration's National Center for Organization Development; Cincinnati, OH.
08/2003 – 8/2004	Predoctoral Clinical Psychology Intern, Veterans Affairs Medical Center; Salem, VA.
08/1999 – 8/2000	Clinical Therapist, Pine Grove Recovery Center; Hattiesburg, MS.
11/1999 – 8/2000	Adjunct Professor, Department of Psychology, William Carey College; Hattiesburg, MS.

Publications

Baugh, F. (2003). Correcting effect sizes for score reliability: A reminder that measurement and substantive issues are linked inextricably. In B. Thompson (Ed.), *Score reliability: Contemporary thinking on reliability issues* (pp. 31-41). Thousands Oaks, CA: Sage.

Baugh, F. (2002). Correcting effect sizes for score reliability: A reminder that measurement and substantive issues are linked inextricably. *Educational and Psychological Measurement*, *62*, 254-263.

Baugh, F., & Thompson, B. (2001). Using effect sizes in social science research. *Journal of Research in Education*, *11*, 120-129.